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USSR Report

TRADE AND SERVICES

No. 1229

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pp 643-647

[Article by K. Kostov of the Ship Freight Coordination Office, Moscow: "International Line Shipping of European CEMA Countries in 1978"]

[Text] The past year of 1978[1] was an important stage in the dynamic development of the economy of the socialist community countries. The productive work of the nations of the CEMA states in this year was directed towards fulfilling the socio-economic programs confirmed by congresses of the communist and workers parties and the tasks of the comprehensive program of integration of the economy of the CEMA states. Definite achievements were made this year in the development of social production, increasing its economic effectiveness, accelerating scientific and technological progress, and in raising the material and cultural standard of living of the peoples of the CEMA member states.

An important event in 1978 was the acceptance of significant long-term programs of cooperation between CEMA countries in key fields of material production. Foreign trade plays an increasing role in the development of the national economies of the CEMA countries. Foreign trade turnovers of the CEMA countries increased in 1978 by 9.6 percent compared to the previous year and by 38.1 percent in comparison with 1975. Mutual foreign trade turnovers among CEMA countries in 1978 increased by 12.6 percent in comparison to 1977 and by 44.9 percent in comparison to 1975, while turnovers with developing countries increased respectively by 3.8 percent and 41.3 percent, and with the developed capitalist countries by 6.1 percent and 24.7 percent.

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[1] This review was prepared on the basis of the statistical data of the Conference of Freight and Shipowners Organizations of the CEMA states. It does not include Romania. The article originally appeared in the BIULETYN INFORMASYYNIY of the Coordination Bureau for Chartering CEMA Ships, No 8, 1979.

In 1978 shipments of foreign trade cargoes by all branches of transportation in the CEMA countries increased by 3.3 percent in comparison to 1977.

The maritime commercial fleet continued to play an important role in the transportation system of the CEMA countries. In 1978 the total number of cargo shipments by the maritime transportation fleet of the CEMA countries increased by 8 percent in comparison to 1977.

Line Fleet of the European CEMA Countries

In 1978 654 ships with a total capacity of 5.2 million tons were employed on the regular international trade lines of the shipping enterprises of the European CEMA countries. In comparison to 1970 the number of ships employed on regular lines increased by 54.2 percent, and their total capacity more than doubled. As a result of renovation and specialization of the line fleet of these countries in 1978, the number of line ships diminished by 4.5 percent, and their total tonnage decreased by 1.4 percent in comparison to 1977 (Table 1).

Among the individual countries Bulgaria and Hungary did not show any changes in the line fleet. They continued to put larger ships into service. In comparison to 1970 the line fleet of Bulgaria increased by 44.8 percent with respect to the number of ships, and by 82.9 percent with respect to capacity, while figures for Germany were respectively 22.5 percent and 72 percent, and for Poland 6.7 percent and 23.7 percent. In 1970-1978 the number of line ships of the USSR increased more or less 2.5 times, and the tonnage of the line fleet more than tripled, while in 1978 the number of line ships and their total tonnage was a little less in comparison with the level of 1977. In 1978 the line fleet of Czechoslovakia was reduced in both number and tonnage in comparison to 1970 and 1977.

In 1978 the line fleet of the European countries of the socialist community, especially Poland and the USSR, was complemented by specialized tonnage (large container ships and "ro-ro" ships).

During the period under examination 99.2 percent of the line tonnage of the CEMA countries was handled by the shipping enterprises of Bulgaria, GDR, Poland and the USSR.

International Freight Lines of the European CEMA Countries

The shipowner enterprises of the European CEMA countries in 1978 maintained 137 regular freight lines in various short and oceanic routes, including 69 lines (147 ships, 487,700 DWT [deadweight tonnage]) on short routes and 68 lines (507 ships, 4,691,000 DWT) on oceanic routes (Table 2).

Table 1. Line Fleets of the European CEMA Countries in 1970, 1977 and 1978

Lata (1)	Ogółem (2)	Bulgaria	Czechosłowacja (3)	NRD (4)	Polska (5)	Węgry (6)	ZSRR (7)
			Liczba statków (8)				
1970	424	29	7	89	150	17	132
1977	685	42	14	115	156	9	349
1978	654	42	5	109	160	9	329
			Nośność w tys. ton (9)				
1970	2514,5	165,2	75,0	525,8	854,0	23,7	870,8
1977	5252,4	292,5	96,3	903,8	978,4	26,5	2954,9
1978	5178,7	302,2	17,0	304,1	1056,4	25,2	2873,8
		Udział w ogólnej nośności floty do przewozu ładunków suchych % (10)					
1970	23,0	24,2	28,2	51,3	50,0	66,4	11,8
1977	32,8	33,9	26,3	70,8	30,4	24,6	28,2
1978	30,7	32,1	34,6	67,2	31,9	22,6	26,3
		Udział w ogólnej nośności floty liniowej państw RWPG % (11)					
1970	100,0	6,6	3,0	20,9	34,0	0,9	34,6
1977	100,0	5,6	1,8	17,2	18,6	0,5	56,3
1978	100,0	5,8	0,3	17,5	20,4	0,5	55,5

Key:
1. Year
2. Total
3. Czechoslovakia
4. GDR
5. Poland
6. Hungary
7. USSR
8. Number of ships
9. Capacity in 1,000 tons
10. Share of total fleet capacity for transporting dry cargo %
11. Share of total line fleet capacity in the CEMA countries %

In 1970-1978 the total number of international freight lines of the European CEMA countries increased by 48.9 percent, that is by 45 lines (230 ships, 2,664,200 DWT). On short routes the increase was 20 lines (8 ships, 192,200 DWT), and on oceanic routes it was 25 lines (222 ships, 2,472,000 DWT).

In 1978 the number of ships working on oceanic routes increased by 33 units in comparison to 1977, and the tonnage increment came to 199,300 DWT. During this same time the number of ships working in short routes decreased by 64 units in 1978, while the drop in capacity came to 273,000 tons. These changes occurred mainly as a result of very logical use of the tonnage on regular lines, and by complementing the line fleet with larger and specialized ships (container ships and "ro-ro" ships). In 1978 the shipowners of the CEMA countries activated the following new lines:

Poland Ocean Lines [PLO] - 2 lines:

Poland - New Zealand between the ports of Gdynia, Hamburg, Rotterdam, Antwerp, Dunkirk, Rouen, Cristobal, Callao, Oakland and Timaru;

Poland - Great Britain (container line) between the ports of Gdynia and Tilbury (one container ship with a capacity of 3,360 tons).

Latvian Shipping Enterprise (USSR) - 1 line:

USSR - Continent between the ports of Riga and Antwerp on ships of the "Engineer Machulskiy" type. The line specializes in transporting automobiles.

Azov Shipping Enterprise (USSR) - 2 lines:

USSR - Libya between the ports of Bierdiansk and Tripolis, two ships of the "S. Gusiev" type;

USSR - Italy between the ports of Zhdanov, Imperia, Savona and Genoa. This is a line maintained in common with the Italian partner since October 1978.

Parallel to the activation of the new lines, the activity of the following lines was suspended:

Table 2. International Freight Lines of European CEMA Countries in 1970, 1977 and 1978

Państwa (1) i zasięgi	Liczba linii (2)			Liczba statków (3)			Nośność tys. ton (4)		
	1970	1977	1978	1970	1977	1978	1970	1977	1978
OGÓŁEM (5)	92	138	137	424	685	654	2514,5	5252,4	5178,7
Linie bliskie (6)	49	75	69	139	211	147	295,5	760,7	487,7
Linie oceaniczne (7)	43	63	68	285	474	507	2219,0	4491,7	4691,0
Bułgaria (8)	9	10	10	29	42	42	165,2	292,5	302,2
Linie bliskie (6)	5	6	6	11	14	14	40,8	47,6	47,6
Linie oceaniczne (7)	4	4	4	18	28	28	124,4	244,9	254,6
Czechosłowacja (9)	3	4	2	7	14	5	75,0	96,3	17,0
Linie bliskie (6)	1	2	1	1	4	1	3,0	8,3	6,0
Linie oceaniczne (7)	2	2	1	6	10	4	72,0	88,0	11,0
NRD (10)	16	16	16	89	115	109	525,8	903,8	904,1
Linie bliskie (6)	5	6	6	23	11	12	18,7	25,5	19,1
Linie oceaniczne (7)	11	10	10	66	104	97	507,1	878,3	885,0
Polska (11)	30	31	33	150	156	160	854,0	978,4	1056,4
Linie bliskie (6)	17	19	19	36	57	31	43,5	161,3	46,0
Linie oceaniczne (7)	13	12	14	114	99	129	810,5	817,1	1010,4
Węgry (12)	3	6	6	17	9	9	23,7	26,5	25,2
Linie bliskie (6)	3	6	6	17	9	9	23,7	26,5	25,2
Linie oceaniczne (7)	—	—	—	—	—	—	—	—	—
ZSRR (13)	31	71	70	132	349	329	870,8	2954,9	2873,8
Linie bliskie (6)	18	36	31	51	116	80	165,8	491,5	343,8
Linie oceaniczne (7)	13	35	39	81	233	249	705,0	2463,4	2530,0

Key:
1. Country and range
2. Number of lines
3. Number of ships
4. Capacity in 1,000 tons
5. Total
6. Short lines
7. Oceanic lines
8. Bulgaria
9. Czechoslovakia
10. GDR
11. Poland
12. Hungary
13. USSR

The Black Sea Shipping Enterprise from the ports of the Black and Mediterranean seas to the ports of Canada and the Great Lakes, and

The Czechoslovak Maritime Navigation from the Baltic ports to the ports of the Persian Gulf and from the ports of the lower Danube to the ports of the eastern coast of the Mediterranean Sea.

In 1978 several lines of Polish and USSR shipping enterprises were reorganized. For example, the port in Copenhagen was added to the ports servicing the Polish container line (Szczecin-Great Britain, London).

The activity of the Polish Australian line was expanded by adding ports in the southern area of the Pacific Ocean to the service ports. The PLO ships on the BALTAFRICA line began to service the ports of Madagascar, Mozambique and Mauritius in 1978.

Two lines of the Soviet Estonian Shipping Enterprise (Norway-Denmark and USSR-Sweden) were united into a single USSR-Scandinavian line. In addition a container ship of the "W. Kuczer" type was added to the line.

Furthermore the activity of the Azov Shipping Enterprise on the Black Sea and Red Sea was expanded to the ports of the nations of Eastern Africa, simultaneously suspending the activity of the Black Sea Shipping Enterprise on this route.

In 1978 the shipowner enterprises of the European CEMA countries continued the practise of introducing new shipping technology on their lines, giving consideration to the specific needs of individual freight routes and taking the interests of their clients into consideration. Container ships ships, semicontainer ships and ships of the "ro-ro" type were added to many lines. In 1978 45 container ships with a capacity of 328,400 tons were working on 17 lines of the CEMA countries. In comparison to 1977, when larger container ships (of the "Engineer Machulskiy" type) were put into service on these lines, the number of container ships was reduced by 10 percent. In 1978 6.3 percent of the line tonnage of the CEMA countries was working on these lines.

In 1978 the total number of ferryboats and "ro-ro" ships on 10 lines of the countries of the socialist community amounted to 19 (150,000 DWT). In comparison to 1979 the number of "ro-ro" ships on these lines dropped by 24 percent, but, thanks to putting large "ro-ro" ships into service on the lines of the Baltic Shipping Enterprise (USSR), their total capacity increased by 14 percent.

In this way modern methods of transporting goods were used on 27 lines of the shipping enterprises of the CEMA countries (19.7 percent of the total number of lines) in 1978. A total of 9.8 percent of the line ships of the CEMA countries and 9.2 percent of their capacity was used on them.

Table 3. Container Lines of CEMA Countries in 1977 and 1978

Państwa, armatorzy, relacje (1)	Porty (2)	3) Liczba statków		4) Nośność ton	
		1977	1978	1977	1978
OGÓŁEM (5)	16 linii w 1977 (29)	30	×	420 571	×
	17 linii w 1978 (30)	×	45	×	328 415
NRD (6)					
NRD — W. Brytania (7)	Rostock, Tilbury, Denton Wharf	1	2	7 800	1 360
Polska (8)					
Polska — W. Brytania, Dania (9)	Szczecin, Londyn, Kopenhaga (31)	1	1	1 100	1 765
Polska — Wsch. Wyb. (10) Ameryki Płn. (11)	Gdynia, Bremerhaven, Nowy Jork, Baltimore, Wilmington (12) (32)	5	—	46 834	—
Polska — Norwegia, Dania	Szczecin, Oslo, Kopenhaga	1	1	1 100	1 365
Polska — Finlandia (13)	Szczecin, Helsinki, Turku	—	2	—	2 670
Polska — W. Brytania (14)	Gdynia, Tilbury	—	1	—	3 360
ZSRR (15)					
Bałtyckie Przeds. Żeglugowe (16)					
Kontenerowa (17)	Leningrad, Londyn, Hamburg, Rotterdam, Antwerpia, (33) Tilbury	4	4	22 711	22 711
Baltatlantic	Leningrad, Hamburg, Brema, Rotterdam, Nowy Jork, Filadelfia, Baltimore, Savannah (34)	6	4	76 455	54 094
Łotewskie Przeds. Żeglugowe (18)					
Okrężna (19)	Ryga, Rostock, Hamburg (35)	1	1	1 120	1 120
RFN — W. Brytania (20)	Hamburg — Hull	2	3	1 832	1 852
Czarnomorskie Przeds. Żeglugowe (21)					
ZSRR — Bułgaria (22)	Iljiczewsk, Odessa, Chersoń, Bielgorod Dniestrowskij, Warna, Burgas (36)	1	1	6 270	6 270
Medatlantic	Iljiczewsk, Neapol, Livorno, Genua, Nowy Jork, (37) Saint John, Baltimore, Filadelfia	3	4	49 500	54 009
Azowskie Przeds. Żeglugowe (23)					
Asitcoline	Żdanow, Neapol, Livorno, Genua, Barcelona, Pireus (38)	2	2	13 110	12 200
Asadcoline	Żdanow, Wenecja, Rawenna, Rijeka, Pireus (39)	2	2	11 314	11 314
Dalekowschodnie Przeds. Żeglugowe (24)					
Fesco Pacific — Kontenerowa (17)	Seattle, Vancouver, Portland, Long Beach, Oakland, Tokio, Nagoja, Hong-Kong, Manila, Bangkok, (40) Singapur	13	9	141 909	98 194
Transsyberyjska Linia Kontenerowa (25)					
Kierunek Japonia (26)	Nachodka, Port Wostocznyj, porty Japonii (41)	8	3	26 040	31 914
Kierunek Hong-Kong (27)	Nachodka, Port Wostocznyj, Hong-Kong, Tokio	3	2	14 197	12 672
Kierunek Manila (28)	Nachodka, Port Wostocznyj, Manila, Tokio	1	2	4 230	11 314

Key: 1. Country, shipowner, routes
2. Ports
3. Number of ships
4. Capacity in tons
5. Total
6. GDR
7. GDR - Great Britain
8. Poland
9. Poland - Great Britain, Denmark
10. Poland - eastern coast
11. of North America
12. Poland - Norway, Denmark
13. Poland - Finland
14. Poland - Great Britain
15. USSR
16. Baltic Shipping Enterprise
17. Container
18. Latvian Shipping Enterprise
19. Loop
20. FRG - Great Britain
21. Black Sea Shipping Enterprise
22. USSR - Bulgaria
23. Azov Shipping Enterprise
24. Far East Shipping Enterprise
25. Transsiberian Container Line
26. Toward Japan
27. Toward Hong-Kong
28. Toward Manila
29. Lines in 1977
30. Lines in 1978
31. Szczecin, London, Copenhagen
32. New York
33. Antwerp
34. Bremen, Philadelphia
35. Riga
36. Il'ichevsk, Bielgorod Dniyestrovskiy, Varna
37. Il'ichevsk, Naples, Genoa, New York, Philadelphia
38. Zhdanov, Naples, Genoa
39. Zhdanov, Venice, Ravenna
40. Tokyo, Nagoya, Singapore
41. Vladivostok, Japan ports

Table 4."Ro-ro" and Ferryboat Lines of CEMA Shipowners in 1977 and 1978

Państwa i linie (1)	Porty (2)	Liczba statków (3)		Nośność ton (4)	
		1977	1978	1977	1978
OGÓŁEM (5)	10 linii 1977 (20)	25	×	131 523	×
	10 linii 1978 (21)	×	19	×	149 960
NRD (6)					
NRD—Finlandia (7) (ro-ro)	Rostock, Helsinki, Kotka	1	1	4 470	4 470
NRD—W. Brytania (8) (ro-ro)	Rostock—Hull	1	1	4 700	4 700
Polska					
Polska—Szwecja (promowa) (9)	Świnoujście, Ystad	3	3	4 220	4 535
Polska—Finlandia (promowa) (10)	Gdańsk, Helsinki	1	2	1 700	2 050
ZSRR (11)					
Bałtyckie Przeds. Żeglugowe (12)					
ZSRR—wsch. (13) wyb. W. Brytanii (ro-ro)	Leningrad—Hull	1	1	6 128	6 128
ZSRR — Kontynent, Zatoka Meksykańska, „Balt-gulf" (14) (ro-ro)	Leningrad, Hamburg, Rotterdam, Antwerpia (22), Houston, Nowy Orlean (23)	2	3	12 256	36 981
ZSRR — Kontynent (ro-ro) (15)	Leningrad, Hamburg, Antwerpia, Rotterdam, Delfzyl (24)	12	4	13 536	23 840
Łotewskie Przeds. Żeglugowe (16)					
ZSRR — zach. (17) wyb. W. Brytanii (ro-ro)	Ryga, Ellesmere	1	1	6 128	6 128
ZSRR — Francja (ro-ro) „Baltmedeast" (18)	Ryga, Hawr, (25) Dunkierka	1	1	6 128	6 128
Kontynent — Zatoka Perska (ro-ro) (19)	Hamburg, Rotterdam, porty Zat. Perskiej (26)	2	3	12 256	55 000

Key:
1. Country and lines
2. Ports
3. Number of ships
4. Capacity in tons
5. Total
6. GDR
7. GDR - Finland ("ro-ro")
8. GDR - Great Britain ("ro-ro")
9. Poland - Sweden (Ferryboat)
10. Poland - Finland (Ferryboat)
11. USSR
12. Baltic Shipping Enterprise
13. USSR - eastern coast of Great Britain
14. USSR - continent, Gulf of Mexico, BALTGULF
15. USSR - Continent
16. Latvian Shipping Enterprise
17. USSR - western coast of Great Britain
18. USSR - France ("ro-ro") BALTMEDEAST
19. Continent - Persian Gulf ("ro-ro")
20. Lines 1977
21. Lines 1978
22. Antwerp
23. New Orleans
24. Delfzijl
25. Riga - Le Havre, Dunkirk
26. Persian Gulf ports

The international freight lines of the European CEMA countries are based in the ports of the northern and southern Far East basins.

In 1978 83 freight lines of the shipping enterprises of the GDR, Poland, USSR and Czechoslovakia, that is, approximately 60.6 percent of all the international lines of the European CEMA countries operated in the northern basin from the ports of the Barents, Baltic and North Sea ports. The number of ships constituted 63 percent of the total line fleet of these countries and 58.3 percent of their capacity.

The greatest shipowners of line tonnage among the shipping enterprises maintaining freight lines in this basin are the shipowners of the GDR (30 percent), Poland (35 percent) and USSR (Murmansk, Baltic, Estonian and Latvian shipping enterprises, 34.6 percent).

In 1978 45 regular lines of the shipping enterprises of Bulgaria, Hungary, USSR and Czechoslovakia, that is, approximately 32.8 percent of all international European lines of the countries of the socialist community, operated in the southern basin, to and from the ports of the Black, Azov, Caspian, Mediterranean and Adriatic seas. The number of ships working there constituted 29.8 percent of the entire line fleet of these countries and 32.3 percent of their capacity.

The most important shipowners of the European line fleet of the CEMA countries in the southern basin are the shipowners of Bulgaria (18.1 percent) and the USSR (the Black Sea, Azov and Danube shipping enterprises, 79.6 percent).

In comparison to 1977 the number of short and maritime lines maintained by Bulgaria and Hungary did not change. The number of ships working on these lines was also maintained at the previous level.

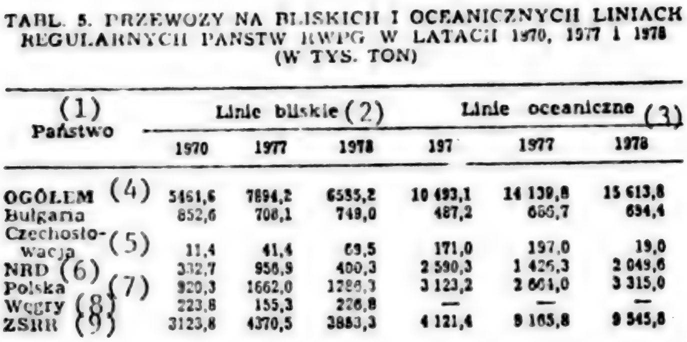
In 1978 the Soviet shipowners suspended one line in the southern basin. The number of ships working on these lines was reduced by 16 and their capacity by 123,100 tons.

In 1978 47 ships with a total capacity of 488,400 tons were working on 9 lines of the Far East Shipping Enterprise (USSR). In comparison to 1977 the number of Soviet ships operating in the Far East basin was reduced by 2.1 percent and their capacity by 1.4 percent (6,900 tons).

Cargo Shipments of the Line Fleet of the European CEMA Countries

In 1978 the total line shipments of the European CEMA countries came to 22.2 million tons, that is, they increased by 38.7 percent in comparison to 1970 as a result of the increase in shipments by Bulgarian shipowners (by 7 percent), Polish shipowners (by 13.8 percent) and USSR shipowners (by 84.9 percent). Shipment with the line tonnage of the GDR and Czechoslovakia diminished slightly, while that of Hungary increased slightly.

Table 5. Shipments on Regular and Short Oceanic Lines of CEMA Countries in 1970, 1977 and 1978 (in 1,000 tons)



TABL. 5. PRZEWOZY NA BLISKICH I OCEANICZNYCH LINIACH REGULARNYCH PANSTW RWPG W LATACH 1970, 1977 I 1978 (W TYS. TON)

(1) Państwo	Linie bliskie (2)			Linie oceaniczne (3)		
	1970	1977	1978	197	1977	1978
OGÓŁEM (4)	5461,6	7894,2	6555,2	10 493,1	14 139,8	15 613,8
Bułgaria	852,6	708,1	749,0	487,2	686,7	694,4
Czechosłowacja (5)	11,4	41,4	69,5	171,0	197,0	19,0
NRD (6)	332,7	956,9	400,3	2 590,3	1 426,3	2 049,6
Polska (7)	920,3	1662,0	1226,3	3 123,2	2 604,0	3 315,0
Węgry (8)	223,8	155,3	226,8	—	—	—
ZSRR (9)	3123,8	4370,5	3883,3	4 121,4	9 165,8	9 545,8

Key:			
1.	Country	6.	GDR
2.	Short lines	7.	Poland
3.	Oceanic lines	8.	Hungary
4.	Total	9.	USSR
5.	Czechoslovakia		

In 1970-1978 cargo shipments increased by 20.5 percent on the regular international lines of the European countries of the socialist community on short routes, while they increased by 48.8 percent on maritime routes.

In comparison to 1977 total shipments increased slightly (by 165,000 tons), mainly because of the increase in shipments by Bulgarian (2.8 percent), Hungarian (46 percent), GDR (2.8 percent) and Polish (6.4 percent) tonnage. This period noted a drop in total line shipments in USSR and Czechoslovakia.

In comparison to 1977 the range of cargo shipments on maritime routes increased by 10.4 percent because of the increase in shipments by Bulgarian, Polish and Soviet shipowners, and diminished by 16.6 percent on short routes because of a drop in the shipments by the GDR, USSR and Czechoslovak shipowners.

Cooperation of Shipping Enterprises of European CEMA Countries in Line Navigation

During the last year international line navigation of the European countries of the socialist community continued to increase, both by way of activation of independent freight lines and as a result of reorganizing existing lines and intensifying and expanding the cooperation of the navigation enterprises of these countries on lines already operated jointly.

Table 6. Joint Lines of CEMA Countries and Shipments on These Lines in 1977 and 1978

Linie (1)	Przedsiębiorstwa żeglugowe współpracujące na linii (2)	3) Liczba statków		4) Nośność w tys. ton		5) Przewozy w tys. ton	
		1977	1978	1977	1978	1977	1978
OGÓŁEM (6)	1977 — 9 linii (10)	183	×	1164,6	×	4594,8	×
(7)	1978 — 9 linii	×	182	×	1200,1	×	4779,5
Bulgaria—ZSRR	Bulgarska Flota Morska, Czarnomorskie Przeds. Żeglugowe (11)	8	8	47,4	47,4	837,1	863,0
Bulgaria—Kuba[1] („Bulcuba") (8)	Bulgarska Flota Morska, Empresa de Navigacion Mambisa (12)	3	4	30,0	50,0	50,0	98,0
NRD—ZSRR	Deutfracht Seereederei, Łotewskie Przeds. Żeglugowe (13)	2	2	6,5	6,5	190,5	197,1
„Uniafrica" (9)	Deutfracht Seereederei, PLO, Estońskie Przeds. Żeglugowe (14)	35	33	194,0	192,1	388,0	640,3
„Baltafrica"	Deutfracht Seereederei, PLO (15)	22	20	174,3	169,2	433,0	429,8
„Baltamerica"	Deutfracht Seereederei, PLO, Bałtyckie Przeds. Żeglugowe (16)	17	17	155,1	155,2	650,8	855,0
„Cubalco"[2]	DSR; Empresa de Nav. Mambisa, P2M, Československa Namorni Plavba (17)	10	8	116,0	56,9	141,0	131,2
„Unilevant"[3]	Bulgarska Flota Morska, DSR, PLO, Estońskie Przeds. Żeglugowe (18)	70	70	348,6	375,6	1200,1	1321,0
„Polarctic"	PLO, Murmańskie Przeds. Żeglugowe (19)	18	23	92,7	117,2	503,7	543,1

[1] Brak danych Empresa de Navigacion Mambisa.

[2] Brak danych P2M i Empresa de Navigacion Mambisa.

[3] DSR współpracuje w tej relacji także z armatorami krajów rozwijających się, dlatego dane tej linii są umownie podzielone.

Footnote: 1. Lack of data on Mambisa Navigation Enterprise
2. Lack of data on PZM [Polish Steamship Company] and Mambisa Navigation Enterprise
3. DSR [German Freight Shipping Company] also cooperates on this route with shipowners from the developing countries, and therefore is divided by convention.

Key: 1. Line
2. Shipping enterprise cooperating on the lines
3. Number of ships
4. Capacity in 1,000 tons
5. Shipments in 1,000 tons
6. Total
7. Bulgaria - USSR
8. Bulgaria - Cuba[1] (BULCUBA)
9. GDR - USSR
10. Lines
11. Bulgarian maritime fleet, Black Sea Shipping Enterprise
12. Bulgarian maritime fleet, Mambisa Navigation Enterprise
13. German Freight Shipping Company, Latvian Shipping Enterprise
14. German Freight Shipping Company , PLO [Polish Shipping Lines], Estonian Shipping Enterprise
15. German Freight Shipping Company, PLO
16. German Freight Shipping Company, PLO, Baltic Shipping Enterprise
17. DSR Mambisa Navigation Enterprise, PZM, Czechoslovak Maritime Navigation
18. Bulgarian maritime fleet, DSR, PLO, Estonian Shipping Enterprise
19. PLO, Murmansk Shipping Enterprise

Table 7. Joint Lines of CEMA Shipowners With Shipowners of the Developing Countries and Shipments on Ships of CEMA Countries on These Lines in 1977 and 1978

Państwa (1)	Liczba linii (2)		Liczba statków (3)		Nośność tys. ton (4)		Przewozy tys. ton (5)	
	1977	1978	1977	1978	1977	1978	1977	1978
OGÓŁEM (6).	9	9	67	54	425,4	427,4	1398,2	1419,8
Bulgaria	1	1	—	—	—	—	—	—
NRD[1] (7)	3	3	43	31	196,3	186,9	410,0	517,3
Polska (8)	1	1	9	8	88,3	89,3	146,0	213,0
Węgry (9)	1	1	1	1	1,3	1,7	14,8	22,1
ZSRR (10)	3	3	14	14	143,5	149,5	827,4	667,4

[1] W relacji Kontynent—Lewant DSR współpracuje także z uczestnikami „Unilevant", dlatego dane zostały umownie podzielone.

Footnote: 1. On the Continent-Near East route the DSR also cooperates with UNILEVANT participants, and therefore the data have been divided by convention.

Key:
1. Country
2. Number of lines
3. Number of ships
4. Capacity in 1,000 tons
5. Shipments in 1,000 tons
6. Total
7. GDR[1]
8. Poland
9. Hungary
10. USSR

Table 8. Joint Lines of CEMA Countries With Shipowners of the Developed Capitalist Countries and Shipments on Ships of CEMA Countries on These Lines in 1977 and 1978

Państwa (1)	Liczba linii (2)		Liczba statków (3)		Nośność tys. ton (4)		Przewozy tys. ton (5)	
	1977	1978	1977	1978	1977	1978	1977	1978
Ogółem (6)	12	14	22	23	91,0	100,7	1587,1	1407,3
NRD (7)	2	2	2	2	5,6	5,6	113,8	100,9
Polska (8)	1	1	1	1	1,1	1,4	38,0	82,0
Węgry (9)	—	1	—	1	—	1,7	—	22,1
ZSRR (10)	9	10	19	19	84,3	92,0	1435,3	1202,3

Key:			
1.	Country	6.	Total
2.	Number of lines	7.	GDR
3.	Number of ships	8.	Poland
4.	Capacity in 1,000 tons	9.	Hungary
5.	Shipments in 1,000 tons	10.	USSR

Table 9. Regular Lines of Shipowners of CEMA Countries Cooperating With Line Conferences and Shipments on Ships of CEMA Countries on These Lines in 1970, 1977 and 1978

1) Państwa	Flota linlowa (2)									Przewozy (3)					
	1970			1977			1978			1970		1977		1978	
	A	B	C	A	B	C	A	B	C	tys. ton	%*	tys. ton	%*	tys. ton 4)	%*
Ogółem (5)	10	67	627,8	26	247	1929,6	25	231	1880,3	1820,7	11,0	4801,5	21,2	5243,6	23,6
Bulgaria	—	—	—	1	8	49,5	1	8	48,5	—	—	196,0	14,1	207,4	14,5
NRD (6)	2	7	71,3	8	90	714,0	8	84	723,3	377,2	13,0	1175,3	49,3	1676,3	65,4
Polska 7)	4	33	301,4	8	99	683,8	8	98	684,7	810,5	21,0	2298,0	53,1	2234,0	49,8
ZSRR 8)	4	27	255,1	9	50	482,3	8	41	423,8	602,0	8,0	1132,2	8,4	1125,9	8,4

A — liczba linii, B — liczba statków, C — nośność tys. ton.
* Udział w ogólnych przewozach liniowych poszczególnych państw.

Footnote: A - Number of Lines, B - Number of ships, C - Capacity in 1,000 tons.
* Share in total line shipments of individual countries

Key:
1. Country
2. Line fleet
3. Shipments
4. 1,000 tons
5. Total
6. GDR
7. Poland
8. USSR

The share of the line fleet of the European CEMA countries servicing joint lines in 1978 was characterized by the following numbers: 259 ships or 39.6 percent of the line fleet of the countries of the community were working on 32 lines. The capacity of these ships amounted to 1,728,200 tons or 33.4 percent of the total tonnage.

In 1978 ships of the CEMA countries transported 7,600,600 tons of cargo (34.2 percent of all line shipments) on these lines.

In comparison to 1977 the line fleet of the European CEMA countries on joint lines increased by 3.1 percent with regard to capacity, and shipments increased by 184,700 tons (4 percent).

The practice of holding conferences among the shipowners of the CEMA countries on the possibility of cooperation on concurrent routes was continued. In the middle of November 1978 a new ferryboat line was activated between the ports of Varna and Il'ichevsk as a result of the joint efforts of the shipping enterprises of Bulgaria and the USSR.

As Table 7 shows, despite the reduction in the line fleet of the CEMA countries in service on lines maintained jointly with the shipowners of the developing countries (a reduction in the number of ships by 19.4 percent and in capacity by 31.7 percent), freight shipments on ships of the CEMA countries increased by 1.5 percent in 1978.

In 1978, in comparison to 1977, 23 ships of shipping enterprises of the countries of the socialist community were in service on 14 joint lines maintained by shipowners of the CEMA countries with partners from capitalist countries, with a total capacity of 100,700 tons, which means a little increase in tonnage. Shipments by ships of the shipping enterprises of the CEMA countries on these lines dropped by 11.3 percent in comparison to 1977.

Cooperation of Shipowners of the European CEMA Countries with Line Conferences

In 1978 there was a further expansion in the contacts between shipping enterprises of the European countries of the socialist community and line conferences.

In 1978 shipowners from Bulgaria, GDR, Poland and USSR cooperated with line conferences on 25 regular lines, that is, the number of lines increased 2.5 times in comparison to 1970. In the course of the last 8 years the number of ships servicing these lines increased approximately 3.5 times, and their capacity and shipments almost tripled. In comparison to 1977 the number of ships dropped by 16 percent and their capacity by 40,300 tons, while line shipments increased by 422,100 tons during the same period.

The international line navigation of the European CEMA countries continued to develop successfully under conditions of bilateral and multilateral cooperation among the shipping enterprises of these countries. In 1978 there were a number of conferences and consultations among shipowners of the CEMA countries for the purpose of finding new ways and forms of cooperation for more effective exploitation of their line ships. As a result of them work was carried out with the intention of creating a single network of agency and stevedore service for the ships of the joint lines in the ports of the Continent (Hamburg, Rotterdam and Antwerp) and, since the end of 1978, the ships of these lines have been serviced for all practical purposes in these same terminals.

Activity aimed at further optimizing the activity of the regular lines of the CEMA countries is still continuing.

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INTERNATIONAL ECONOMIC RELATIONS

FORMS OF CEMA COOPERATION DISCUSSED

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[Article by I. I. Pashkova and N. B. Sterlina: "Problems in the Interaction of the Forms of the Multilateral and Bilateral Cooperation of the CEMA Member Countries"]

[Text] The article is devoted to an analysis of the development of the multilateral and bilateral forms of cooperation between the CEMA member countries at the current stage. The most important preconditions for and characteristics of the multilateral and bilateral economic relations of the CEMA countries are examined, and the basic spheres of their practical use are revealed. The specific features of the interaction between the bilateral and the multilateral are shown in connection with the composition and realization of long-term special-purpose cooperation programs and bilateral long-term production specialization and cooperation programs.

The thirty years of experience in cooperation between the fraternal socialist countries within the Council for Mutual Economic Assistance graphically testifies to a steady increase in the role of the international socialist division of labor. The development of reciprocal economic and scientific and technical relations has become a tested and reliable method of the successful accomplishment of the tasks of socialist and communist construction. "Our trade with the fraternal socialist countries," it was noted at the 25th CPSU Congress, "has a special character; it reflects the stable economic relations which have arisen during the process of socialist construction and mutual cooperation."[1]

The growing role of reciprocal economic relations requires a new approach to the mechanism of realizing them. This problem is becoming especially important in connection with the further improvement of the integration structure of the cooperation of the CEMA countries. The process of socialist economic integration which is qualitatively transforming the character of the joint economic activities of the socialist countries has raised the question of an effective combination of the bilateral and multilateral forms of economic cooperation in a new way. This problem is becoming especially acute in connection with the development and realization of the long-term special-purpose cooperation programs in the development of the basic branches of material production of the CEMA countries which was begun by these countries in 1976.

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[1] "Materials of the 25th CPSU Congress," Moscow POLITIZDAT, 1976, p. 135.

The composition of long-term special-purpose programs signifies a new stage in the development and improvement of economic cooperation which is characterized by a search for multilateral approaches to the solution of integration problems which are adequate the present level of reciprocal economic relations. At the same time, the intensification of multilateral cooperation is now being carried out while the role of the bilateral economic relations of the CEMA countries is being preserved and strengthened. Significant in this connection is the agreement between the leaders of the CPSU and of the fraternal parties regarding the development of a number of bilateral long-term programs for the development of production specialization and cooperation which was reached in the summer of 1977 at the Crimean meetings. For this reason it is important to uncover the dialectics of interaction between bi- and multilateral cooperation at the various stages of economic development and to examine it in the light of the latest tendencies in the integration processes.

It has to be noted that from the very beginning of its establishment the development of the world socialist system has been characterized by the existence of a whole series of economic, political, geographic, and other factors which have determined the endeavor of the CEMA countries to achieve multilateral interaction in solving the problems of economic construction. This has found its expression in the creation within the CEMA of a number of multilateral functional organizations and branch commissions and in the existence for a long time of the institution of multilateral recommendations on the development of international specialization and scientific and technical cooperation.

However, the choice between the bilateral or multilateral form of a concrete variant of cooperation has frequently depended not upon a consideration of economic expediency, but upon the objective conditions of the economic development of individual countries. In particular, the task of the accelerated industrialization of a number of socialist countries to a large extent determined the intensification of their bilateral economic relations with the USSR which possesses an enormous economic potential, a capacious domestic market, and extensive capabilities for producing various goods and services. In addition, the vast majority of the interrelations of the European socialist countries were also organized on a bilateral basis. As a result, the world socialist economy was formed at its first stages of development primarily as an aggregate of bilateral economic relations.

Toward the middle of the 1960s the situation began to change. The successes of the CEMA countries in establishing the material and technical base of socialism and the advancement of an increase in economic efficiency as the paramount task and, correspondingly, the strengthening of the role of reciprocal cooperation in accomplishing it created a whole series of preconditions for the "equalization" of the capabilities of the socialist countries with their inclusion in a system of reciprocal economic relations, which objectively stimulated a shift toward wider multilateral joint activities.

Multilateral relations which potentially expand the sphere of the search for optimal ways to solve the problems of economic cooperation correspond to the greatest extent to the essence of socialist economic integration, since in the final analysis they are based on the use of the advantages of large-scale labor and production cooperation. It is precisely with multilateral interaction that the realization of the fundamental goals of the process of socialist economic integration is connected.

The shift by the majority of the CEMA countries to a qualitatively different regimen of social reproduction is a very important factor which is giving rise to a deepening of multilateral economic cooperation at the stage of the development of integration. With the further intensification of social production the foreign economic factor can no longer be regarded as a supplementary and auxiliary one. For this reason the choice of an optimal variant for future economic development has to be based on an overall and comprehensive study of the conditions and possibilities for reciprocal cooperation with regard to the long-term development of the economy of the commonwealth as a whole. Only this kind of approach makes it possible to purposefully form the long-term economic interaction of the CEMA countries. Moreover, this approach makes it possible to place a major emphasis on the effectiveness of a jointly selected direction of cooperation, subordinating to it the entire aggregate of the reciprocal trade and economic actions within the world socialist system.

All of this makes it possible to draw the conclusion that with the changing scope and material content of economic cooperation multilateralness is no longer only a means of the quantitative and spatial expansion of the framework for solving problems which exceed the material capabilities of one or two countries; it contains a number of fundamental qualitative aspects and the advantages of a kind of "multiplication" effect. What is meant here is basically the advantages of the direct formation of a variant for the solution of one or another problem which is optimal both for each individual country and for the commonwealth as a whole. The basis of the effect of multilateral cooperation consists above all in the advantages of a multilateral coordination of national economic interests as the most rapid and rational way of finding a single international interest.

As an instrument first of all of macroeconomic interaction, the multilateral procedure of adopting joint decisions is aimed basically at the solution of the kinds of large-scale problems which affect the basic indicators of the development of the national economies of the CEMA countries (rational income, fixed capital, capital investments, consumption, and so forth) a change in which affects the production structure and the structure of consumption and so forth. For this reason, the basic function of multilateral cooperation consists in the planned coordination above all of the strategic national interests of the CEMA countries with one another and with the interests of the commonwealth as a whole.

Under these conditions, the most effective directions are multilateral coordinations of the long-term interests of mutual economic cooperation in the development of the basic directions and fundamental goals of the further development of the world socialist economy. Multilateralness here acts as a very important factor in realizing qualitative and quantitative changes in the structure of the mutual relations which are aimed at the formation of a single highly effecient international economic complex. As the limits of multilateral coordinations during the course of the integration process expand, this role of multilateralness will invariably grow.

A concrete manifestation of the action of this function is in the expansion and deepening of multilateral planning work on working out the prospects for the development and cooperation of the CEMA countries as a result of which the spheres of multilateral and bilateral interests in the joint solution of the basic problems of economic cooperation are supposed to be determined. Actually, these problems are solved through reciprocal consultations on the basic issues of economic and scientific and technical policy and by means of joint forecasting and of an exchange of the results of national forecasts.

As socialist integration develops there has to be an increase in the importance of such a function of a multilateral character as the organizational-methodological function. We are speaking about the growing together and gradual identicalness of the methods of organizing and managing foreign economic activities, about the methodology of calculating the general economic indicators of the development of national economies and of foreign economic relations, and, especially, about finding a single basis for solving such concrete economic problems of cooperation as prices, forms of settlements, and so forth.

This is all the more necessary since in our current practice multilateralness to a certain extent still has a formal character which consists in the gap between the system of multilateral planning coordinations and the sphere of the planned determination of the economic conditions of cooperation. The latter as a whole amounts at the present time to a bilateral balancing of foreign economic exchange. It is becoming obvious that the creation of conditions for the development of multilateral cooperation is connected with overcoming the shortcomings of the present system of settlements, with shifting to a multilateral determination of prices for the output which is supplied within the framework of concrete integration measures, with the creation of a system of commodity reserves, and with more flexible and valid planning of the structure and amounts of reciprocal commodity flows.

In the future the possibilities will be created for the creation of a single mechanism for the multilateral regulation of cooperation in which planning decisions will be organically combined with international cost accounting instruments and indicators. In other words, an expansion of the multilateral economic relations of the CEMA countries has to be supported by all of the blocks of the economic mechanism of cooperation and by their organic interaction and combination.

For present-day practice the most intensive development of multilateral forms of cooperation is characteristic first of all for those places where it, by creating the possibility for an important economic maneuver within the commonwealth as a whole, seriously expands the material and technical base for solving various problems by means of uniting the material, financial, and labor resources of all (or of a majority) of the CEMA countries. Thus, the construction through joint efforts of the largest projects for the production of the most important types of output is performed in most cases with the participation of all of the CEMA member countries.

In recent years multilateral international production specialization and cooperation in the branches of the processing industry has received a substantial development. Today, in addition to the more than 1,000 bilateral agreements in effect, there are 112 multilateral agreements on international production specialization and cooperation. In addition, on the average the scope of each of them exceeds the scope of a bilateral agreement by approximately 10 times. Around half of the specialized output is accounted for by multilateral agreements, which provide grounds for speaking about the approximately equal development of international specialization and cooperation on a bilateral and multilateral basis.

At the same time, the sharp increase in recent years in the amount of multilateral agreements on international production specialization and cooperation has to a substantial extent been the result of the formation of more or less single-type structures of industry, which has determined the appearance of certain "bottlenecks" in the development of this sphere of the economy and the coincidence of import interests in many directions. In most cases these directions are the industrial realization of the latest achievements of scientific and technological progress. In order to provide the national economies with the necessary output the task arises of a maximum unification of the resource potentialities of the CEMA countries within the framework of a single multilateral agreement on international production specialization and cooperation.

Multilateral solutions are also winning strong positions in scientific and technical cooperation. According to the data of the CEMA Committee on Scientific and Technical Cooperation, in 1976 there were 108 multilateral agreements and contracts in effect on cooperation in the field of science and technology. At the same time, work proceeded on a bilateral basis on the basis of 150 scientific and technical cooperation contracts within whose framework more than 2300 topics were worked on. Cooperation in the scientific and technical sphere, especially joint work, is in greater need than specialization in production of equal or approximately equal conditions for scientific and technical research and development. At the current stage this is determining the primarily bilateral character of the solution of many scientific and technical problems.

At the same time, there are a large number of examples when scientific and technical cooperation which has been begun on a bilateral basis develops into multilateral cooperation, especially in the fields connected with corresponding multilateral programs of production cooperation. This is what occurred with development work in the field of the creation of a Single System of electronic computers, automated systems for the planning and technical preparation for production, metal-cutting machine tools with digital program controls, and so forth.

All of this shows that the growing role of multilateral agreements and of concrete joint production and technical solutions is a regular process in the development of socialist economic integration and a powerful stimulus for the improvement of the reciprocal economic and scientific relations of the CEMA countries.

At the same time, the development of bilateral economic relations which regulate the complex of relationships that arise on the basis of bilateral interests is going forward. It is clear that the multilateral approach is in no way diminishing the role and importance of the bilateral relations of the socialist countries which are still far from having exhausted their possibilities and which retain their leading position to this day.

Measures of a bilateral character sometimes do not yield to multilateral measures either in their scope or in their importance for the social and economic development of the individual CEMA countries. In addition, bilateral relations frequently become only the initial stage of the development of multilateral contacts. All of this testifies to the objective reciprocal determination and reciprocal supplementariness of the systems of the bilateral and multilateral interaction of the CEMA countries during the course of the development of their reciprocal economic cooperation. It appears that the basic problem is to find and uncover the chief directions of the systems use of these methods of organizing the international socialist division of labor and to consider them in the channel of an overall improvement of the entire system of planned cooperation between the countries.

It is possible to distinguish two qualitatively different fields of bilateral cooperation which are characteristic for the current stage of the development of socialist economic integration. The first is connected with an objective interest by only a single pair of countries in the joint accomplishment of various kinds of production and technical tasks. These tasks can be related to all of the diverse forms of joint activity -- foreign trade, scientific and technical, production, investment, and so forth.

In our view there are grounds for believing that this field of bilateral relations will expand. This point of view is based on an increased role for cooperation in the future as a structure supplementing element connected with the more selective character of the development of the economies of each of the countries. The result of this kind of development should be a strengthening of the profilization of the development of each national economy and the performance by it of concrete functions which have been assigned to it to supply the needs of a region. This means that each direction will develop a smaller number of partners and, consequently, the role of bilateral relations in solving very important cooperation problems may increase.

However, this kind of development can only be achieved with a simultaneous rise in the level of multilateral agreements in order to form a structurally optimal variant of the economic complex of the entire commonwealth and to determine the place in it of each national economy. Thus, a strengthening of bilateral relations at the stage of integration is justified only when there is an increased degree of planning in multilateral agreements for the purpose of forming economically rational relationships.

Another field of bilateral cooperation which at the present time has extremely wide limits performs the actual function of servicing and ensuring the realization of multilateral agreements. It is determined by the insufficient development of the methods of the multilateral coordination of economic conditions for the realization of a reciprocal exchange of activity. For this reason, when the real economic parameters of cooperation are determined it becomes necessary to move from multilateral agreements to a system of bilateral agreements and contracts. In particular, the bilateral basis has to be used to solve the problems of coordinating the amounts and structure of mutual commodity turnover, coordinating prices for certain positions, and so forth.

At the present time international bilateral agreements have a mandatory character, since a guarantee of the fulfillment of foreign economic commitments is the inclusion of deliveries in the commodity quotas of a corresponding trade agreement which is for the present is concluded only on a bilateral basis. For this reason, the refinement of all of the indicators of the delivered output and the calculation of its cost in the trade balance of the countries takes place on a bilateral basis. It is natural that the necessity for such a duplication of essentially multilateral agreements with a system of bilateral agreements will gradually fall away as solutions are found within the CEMA to the problems of price setting, multilateral settlements, a single methodology for computing economic indicators, and so forth on the basis of subordinating tactical bilateral solutions to collectively adopted positions which have been determined on a multilateral basis.

At the present time the multilateral procedure of adopting joint economic decisions manifests itself in its most developed shape in the form of the composition of the five-year plan for multilateral integration measures and for long-term special-purpose cooperation programs. The basic function of the long-term special-purpose cooperation programs is the organization of planned interaction on the international scale of the mutually connected branches of the production of the CEMA countries which participate in the realization of any concrete goal of economic cooperation.

This interaction is achieved by the fact that the concrete development of a program follows the line of uniting its resource and purpose parts by means of the coordination of a functional structure, that is, through working out a coordinating system of measures which are connected to one another in their schedules and executors. Only in this case is it possible to discover the most rational ways of using existing resources to satisfy the total needs of the interested countries, since the attainment by the individual branches of one or another country of a definite level of export production will be aimed not at aximum of one or another product, but at the optimization of its "contribution" to the accomplishment of common tasks.

Thus, the long-term special-purpose cooperation programs have the task of raising the joint multilateral economic activities of the CEMA countries to a qualitatively new level -- the level of ensuring inter-branch relations and of coordinating decisions which are made at all of the phases of the reproduction cycle.

The realization of the special-purpose program is of fundamental importance for the further development of integration since, in the final analysis, it has to lead to the organization of stable and long-term multilateral cooperation in science, technology, and in the production, marketing, and consumption of specific types of output and to the formation of large scientific production complexes in the CEMA countries.

The concrete content of the long-term special-purpose cooperation programs depends above all upon the character and characteristics of the problems which are being solved within their framework. Nevertheless, a principled procedure of developing the programs, regardless of their content, has a number of common features. In particular, one of the most important stages in the work on the programs is the translation of a complex of measures which have been agreed upon among the countries into the form of addressed assignments for the countries which are tied to the organizational-managerial structures of their economies and which specify the volume, the sequence of the performance of the assignments, the beginning and length of the necessary work, and so forth. This leads to the adoption of a complex of international contracts and agreements which fix the commitments of the countries to realize program measures. It is precisely when the concrete contract structure of a program is determined and when the commitments which have been adopted are fixed in law that the problem of a rational combination of bilateral and multilateral agreements arises in its most acute form.

It would appear that most identical to the content of the long-term special-purpose cooperation programs as an on the whole multilateral procedure of developing a system of interconnected measures is the formation of programs in the form of a complex of General Agreements -- joint planning documents which define in the final and intermediate goals of measures their basic agreed upon parameters and which coordinate them by resources, schedules, and executors.

At the same time, the characteristics of the long-term perspective do not permit one to operate with sufficiently concrete indicators and to coordinate in detail the products list and cost characteristics of the future production and reciprocal relations within one or another program. As practice shows, the concrete realization of planned multilateral long-term economic tasks is connected above all with a passage through a system of agreements for a shorter period of time and, as a rule, on a bilateral basis; that is, it has to be reinforced by a complex of bilateral agreements on economic and scientific and technical cooperation within the framework of the coordination of the five-year national economic plans.[2] In addition, a fundamental thrust of the multilateral forms of agreement (regardless of the forms of cooperation) consists in the determination of the most common parameters of the planned measures, while the bilateral methods of coordination have the task of ensuring the "realization" aspect of these measures.

Bilateral agreements are concluded, as a rule, on the basis of and to aid, the development of multilateral agreements on the realization of long-term special-purpose cooperation programs (LTSPP). They specify the obligations of each participating country along the entire chain of the realization of a concrete measure. Within the framework of the bilateral agreements and contracts, solutions are found to the tasks of determining the amounts and structure of mutual deliveries, for a detailed products list, the development of measures for the economic, scientific and technical, and organizational preparation of production, and also a determination of the concrete economic terms of the mutual relations -- the prices for each concrete product, credit and commercial terms, and so forth.

The necessity for dismembering a multilateral agreement within the framework of a LTSPP into a system of bilateral agreements and contracts is dictated, first, by the fact that during the course of the realization of the common tasks of the programs there arises the necessity for expanding, refining, and perfecting them. The bilateral approach is capable of more flexibly realizing the continuity and concretization of planning agreements which are connected with a refinement of the amounts and parameters of final output, a detailization of the indicators of the resource part and a more exact determination of the contribution of each country to the resource support of the program, the determination of a number of measures previously not included in the LTSPP due to the high degree of the aggregateness of its indicators, with the distribution of assignments by years, and so forth. Secondly, the movement to bilateral agreements is a result of a necessity for assigning the commitments of the program in the system of national economic plans. Meanwhile, the methods and indicators of bilateral agreements are at the present time the most adequate to the existing forms of reflecting mutual commitments in national plans. Of great importance here are the methods of foreign trade balancing which have developed, the fact that most of the planning mechanisms of the CEMA countries are not adapted to the system of multilateral settlements, and so forth.

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[2] The breakdown of General Multilateral Agreements within the framework of long-term special-purpose cooperation programs into a complex of bilateral agreements of a lower rank is made substantially easier by the circumstance that most of the long-term special-purpose cooperation programs which are now being worked out consist basically of intercoordinated but relatively independent blocks the responsibility for whose realization is supposed to be voluntarily taken upon themselves by the participating countries. Within the framework of the long-term special-purpose cooperation programs the participant countries as a rule, independently decide upon the questions of preparing and organizing the production of the output which has been assigned to them. In other words, the programs coordinate only the output parameters or final results of national labor; that is, they reflect the commitments of the countries to produce some specific output and the schedules for the beginning of mutual deliveries.

One of the most important problems of the interrelationship between bilateral and multilateral relations at the current stage is the coordination of the bilateral long-term program for the development of production specialization and cooperation and of the multilateral long-term special-purpose cooperation program. At the basis of the interrelationship between these programs are the single fundamental directions of their development -- a long-term strategic orientation, and the major size of the problems posed. Both forms of the coordination of the economic interests of the countries are directed, in the final analysis, toward the coordination of national conceptual economic decisions, and the discovery of strategic "coupling points" in the economic complex of the countries for the long-term.

They differ chiefly in their emphases in posing and working out the fundamental goals of economic cooperation -- in the bilateral programs (BP) the basic emphasis is on the disclosure of the specific tasks of the development of the mutual relations specifically for the two given socialist countries and, correspondingly, on the search for solutions which promote the realization of these tasks. The formation of the LTSPP takes place from the point of view of problems which are common for an entire region of CEMA countries. Nevertheless, this does not mean that the BP are limited solely to problems which have an exclusively bilateral significance. They also have to promote the realization of the tasks which follow from the LTSPP and which have been interpreted for the terms of the bilateral cooperation.

Consequently, the contents of the BP and the LTSPP inevitably overlap in that part of them which solves the most important key problems of economic cooperation which influence the development of both the bilateral and the multilateral relations of the CEMA countries. At the same time, this must not be a mechanical reproduction in the BP of most of the problems of the long-term special-purpose programs. For this reason, it is necessary to find methods for a substantiated differentiation of the assignments of the LTSPP and their distribution among the bilateral production specialization and cooperation programs. The degree of the deaggregation of the indicators of the multilateral LTSPP which are included in the BP is determined in relation to the structure of the latter, the relationships between the forms and sections, and also their differences from the forms and sections of the LTSPP, and the methods of fixing the commitments which have been adopted; that is, in the final analysis, upon the character of the document which is adopted on a bilateral basis and the degree of its correspondence to most of the LTSPP.

It is already obvious that the content and scope of the problems which are solved within the different BP and, consequently, the specific nature of the measures which go into them will differ in an essential manner from one another. Nevertheless, despite all of the differences in the construction and content of the BP it is necessary to strive to see to it that they correspond with the principles of the construction, structure, and form of the adoption of the commitments which have been adopted by the CEMA countries in forming the LTSPP. The interrelationship between the BP and the LTSPP has to be organized chiefly along the line of ensuring a connected development of the indicators which fix the commitments of the countries to realize measures. These indicators have to be summary ones and comparable to one another, and the latter is possible only when a unity of methodological principles in calculating and employing them is observed. In addition, they have to provide a maximum reflection of the specific nature of the measures and clearly and simply characterize their content.

The deployment in the BP of the bilateral commitments which follow from the LTSPP will make it possible to work them out more competently with regard to the possibilities and limitations of the bilateral balancing of foreign economic relations, to make the resource preconditions clear, ensure an organic interrelationship with the other forms and directions of bilateral cooperation, and so forth. Only in this case will the bilateral programs be able to perform the function of a very important instrument of realizing the multilateral agreements which have been reached by the CEMA countries within the framework of their long-term special-purpose cooperation programs.

At the same time, the long-term bilateral programs also have an enormous independent importance for the development of the international socialist division of labor. The bilateral programs have to embrace a wide range of questions connected with the working out of the terms of economic cooperation, a coordination of goals and of ways of realizing them, and concrete measures. For this reason, the point of departure in composing the BP and in ensuring that the decisions made within their framework point in a single direction is a multilateral agreement on the most important principles of long-term scientific and technical, production, and investment policy for the cooperating countries. Only with this approach will the BP be able to realize their strategic function and the aggregate of the BP and the LTSPP embrace the entire front of integration processes in a region of CEMA countries.

The disclosure in the process of working out the LTSPP and the BP of the chief directions of the economic cooperation which play the role of "intersection points" in collective and national planning will facilitate the process of including the most important commitments for the realization of the LTSPP in special integration sections of the economic plans of the CEMA countries. An important role has to be played in this by the Coordinated Plan of Multilateral Integration Measures (CPMIM) for 1981-1985 which generalizes the most important and basic multilateral measures of the LTSPP. The CPMIM is supposed to be the basic mediating element which will permit an organic inclusion of the results of the multilateral solution of the problems of economic cooperation in the assignments of the national economic plans.

The CEMA countries already have experience in composing a Coordinated Plan which was the result of a multilateral coordination of their economic plans for 1976-1980. A very important advantage of the Coordinated Plan was that it ensured an overall and systems approach to the development of integration measures as a result of which the sphere of coordinated economic decisions was substantially widened, having gone beyond the framework of the sphere of distribution.

As practice shows, the structure and indicators of the CPMIM for 1976-1980 accord as a whole with the task of a harmonious inclusion of its assignments in the national economic plans. However, the appearance in the measures of the LTSPP of a number of specific aspects requires an improvement of the content and structure of the Coordinated Plan for the forthcoming five-year period.

First, the CPMIM for 1981-1985 should include within itself not all of the measures of the LTSPP, but only the basic ones which are of paramount importance. A very important criterion for including the measures of the LTSPP in the CPMIM is their importance for the development of the entire complex of productions which have been put into operation in the program, their influence on the realization of the final goals of the program, and the amount of resources necessary for their realization.

Secondly, the realization of most LTSPP will require the interrelated planning of the development of a number of branches and productions which are frequently not connected with the production of final output but which guarantee the realization of the program as a whole, which gives rise to the necessity for important changes in the form of fixing these measures in the Coordinated Plan. For this reason, the course of the further improvement of the forms and indicators of the CPMIM should be oriented toward increasing the degree of overallness in the planned assignment of the problems being solved. One of the ways of doing this is a thorough reflection of the economic parameters of the measures of the LTSPP in all of the sections of the Coordinated Plan.

The composition of the General Plan is an iterative process which requires for the purpose of the formation of an optimal variant a comparison and coordination of the parameters of the most important integration measures in the General Agreements which are made up on its basis and the indicators of the bilateral agreement contracts which reinforce these agreements. In other words, the development of the CPMIM is the result of a continuous interaction between multilateral and bilateral methods of coordination, for only this kind of approach ensures at the same time the necessary level of overallness and of detail in the solution of the problems being considered. In addition, the multilateral agreements become the initial stage of competent decision making in bilateral negotiations, while at the concluding stage they summarize and generalize the bilateral decisions. This kind of scheme for combining bilateralness and multilateralness in economic cooperation is the most adequate one for the current stage of the development of socialist economic integration.

By generalizing the basic indicators of multilateral cooperation, the Coordinated Plan goes far toward assisting the inclusion of these indicators in the national economic plans by means of special integration sections. At the same time, not only multilateral but also a large number of very important measures of a bilateral character are included in the individual sections on the development of economic integration in the plans of a number of CEMA member countries, which requires the corresponding construction of bilateral long-term programs in order for their coordinated parameters to be able to find the fullest reflection in the national plans.

If the agreements which have been reached in the development of the BP are not fixed in national planning documents, the fulfillment of many multilateral economic decisions is placed under a threat. For this reason, it is important that when each pair of socialist countries works out its bilateral programs there is a coincidence of the "language" in which the problems of economic cooperation is posed -- this applies to the degree of their aggregation, their classification, the units of measurement of needs, the methods of computing them, and so forth. This kind of approach would assist in the accomplishment of the joint economic activities of the CEMA countries and will create optimal conditions for the realization of the strategy of the development of economic cooperation and socialist integration which has been agreed upon on a multilateral and a bilateral basis.

In conclusion, we would like to note that the formation of a developed integrated community of CEMA countries is a long-term process which is characterized by a constant improvement of the forms and methods of their economic interaction. The latter are, in the final analysis, derivative from the goals and tasks of the concrete stage of the development of socialist economic integration. A study of the qualitative characteristics which are internally inherent in one or another stage of integration provides a key to understanding the dialectical unity of the full diversity of the elements which comprise it in their development and interaction. An example of this is an analysis of the combination of bilateralness and multilateralness in the economic cooperation of the CEMA countries.

The qualitative changes in the economic interrelations of the socialist countries at the stage of integration and the emergence of a large number of large-scale overall problems which are of mutual long-term interest have given rise to the necessity for a more intensive development of collective and multilateral forms of economic cooperation which make possible a maximum mobilization of the resources of the entire socialist commonwealth. It would be a great over-simplification to deduce the necessity for multilateral cooperation from a simple understanding of economic integration as a collective process. A number of other factors are also in operation here.

Capitalist integration is also a collective process which draws a specific aggregate of capitalist states into economic interaction. However, with imperialism the multilateralness of the methods of state-monopoly regulation of integration is one of the most important preconditions above all for the performance for its discriminatory function and wide foriegn expansion.

Socialist integration is characterized by a fundamentally different situation -- multilateral coopration here acts as a very important internal factor which optimizes the process of making joint economic decisions. It is for this reason that the collective, multilateral inter-state measures of the CEMA countries are aimed not at the creation of common trade and customs barriers which protect mutual economic relations from the influence of third countries, but at their direct planned regulation and the creation of the conditions for their more effective functioning. This distinctive feature of socialist integration graphically reveals the objective nature of the processes of the displacement of the center of gravity of mutual agreements to a multilateral basis.

At the same time, the development of the multilateral cooperation of the CEMA countries not only does not hold back, but stimulates bilateral economic contacts. Practice shows that the high road of the development of socialist economic integration is not in an absolute squeezing out of the bilateral economic relations of the socialist countries, but in overcoming their basic shortcomings and in finding the sphere of their most rational application and operation.

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INTERNATIONAL ECONOMIC RELATIONS

CEMA MACHINE BUILDING COMPLEXES DISCUSSED

Moscow IZVESTIYA AN SSSR SERIYA EKONOMICHESKAYA in Russian No 6,1979 pp 83-93

[Article by N. V. B rokh and S. N. Sil'vestrov: "The Machine Building Complexes of the CEMA Member Countries in the International Division of Labor"]

[Text] The special characteristics of the development and participation in the international division of labor of the individual machine building complexes of the CEMA countries are revealed. The attained level of international specialization and cooperation in machine building production and its correspondence to the capabilities of the complexes is characterized. The interconnections between the basic changes and tendencies in the development of the branch and export structures of the machine building complexes are analyzed. The prospects for the participation of the machine building complexes in the international division of labor are shown.

The machine building industry is one of the basic components of the national economic complexes of the CEMA member countries. Within each complex all of the branches and productions are united by definite technological and structural relations and are subordinated in their development to the more common tasks of the socio-economic and scientific and technical development of the economy.

The state and the level of the development of a machine building complex and its completeness determine to a substantial extent the profile of national economic complexes and the degree and forms of their participation in the international division of labor. The general economic and the branch and technological structures of industry and of an economy depend to a large extent upon them. The machine building complex influences the development of other branches of the economy not only as a producer, but also as a consumer. The growth rates and production levels in the branches of the fuel and raw materials, energy, metallurgical, and other complexes and also the rates of scientific and technological progress depend upon the volume and structure of the demand and the rational organization of labor and production in the machine building industry.

The international division of labor in machine building is to a large extent determined by the national conditions of the development of the complex and, above all, by its structural-functional type. Three basic types may be distinguished -- universal, intermediate (universal-specialized), and specialized. The basic indicators for distinguishing the different types of complexes are the quantitative composition of branches, the degree of universalization and dynamism in development, the diversification of the products list of the products produced by the entire machine building complex and by each branch, production in scientific potential, and participation in the international division of labor. The type is determined by the development of the social division of labor within a country and by its readiness to participate in international cooperation. In this respect, the machine building complexes of the CEMA countries are far from identical in their development and on the basis of the above criteria can be distributed into a number of groups. The machine building of the GDR and the Czechoslovakian Socialist Republic has the first and most universal type. An intermediate position is occupied by the Polish People's Republic and the Hungarian People's Republic, while the People's Republic of Bulgaria and the Socialist Republic of Romania are characterized by a clearly expressed type of a complex in formation. The machine building of the USSR occupies a special place in the international socialist division of labor. Its relatively high level of production with sufficient material, financial, and human resources makes it possible to combine the mass production of a wide products list of relatively simple products with the individual, unit, and small-series production of the most complex types of machinery and equipment. The internal laws of the development of the machine building complex in combination with other factors of the development of the economy (socioeconomic, historical, natural-geographic) determine the special characteristics of the international specialization of the USSR complex. Its characteristic features are: a wide profile of specialization which is based on the fullness and diversity of its branches and on a rich products list of products; a higher proportion than in the other countries of unique, unit, and small-series output in exports; and the influence on the amount and effectiveness of the specialization and cooperation of machine building of the specific situation of the USSR as the chief supplier of fuel and raw material and energy resources to the CEMA countries.

The complexes of the GDR and the Czechoslovakian Socialist Republic are close in a number of the indicators to the universal-specialized type of a machine building complex. They produce 70 to 80 percent of the world products list of machine building output and possess stable traditions in production and a relatively high technical and economic level of their output and production. As a result of the limited nature of domestic demand for their output, the sizes of many of the productions are considerably smaller than the optimal ones and a number of them have a low profitability level. Under these conditions, the countries try to expand machinery and equipment exports on the basis of international production specialization and cooperation and the curtailment of unprofitable productions. For a long time they have been large exporters of machinery and equipment to the market of the CEMA countries.

With regard to the level of the diversification of the machine building complex, the technical experience which has been gained, and other indicators the Polish People's Republic and the Hungarian People's Republic follow after the GDR and the Czechoslovakian Socialist Republic. Hungary produces 60 percent of the products list of machine building, while the Polish People's Republic produces more than 100,000 out of 170,000 types of output which is produced in the CEMA countries.[1] A characteristic feature of the machine building complexes of these countries is extensive cooperation and patent and licensed relations with the developed capitalist countries. Economic policy in this field, in particular, is oriented toward the forced development of export branches into which most of the capital investments are assigned. One of the motivations for this policy is the urgent necessity for balancing the countries' balance of payments.

The People's Republic of Bulgaria and the Socialist Republic of Romania possess the youngest machine building industry. In these countries the machine building complex was practically created anew during the post-war years. The formation of the complexes is not yet entirely completed and in recent years a reorganization of their structures has been taking place in the direction of a greater correspondence to the resource capabilities of the countries. The development of machine building in the People's Republic of Bulgaria and in the Socialist Republic of Romania is taking place at the most dynamic level compared to the other CEMA countries. High growth rates are characteristic for the machine building complexes of the CEMA countries. Thus, during the years 1961-1975 the amount of the output of machine building and metal working in the People's Republic of Bulgaria increased by 9.4 times; the Socialist Republic of Romania -- 9.8; the Polish People's Republic -- 6.8; the USSR -- 5.4; the Hungarian People's Republic -- 3.4; the Czechoslovakian Socialist Republic -- 3.2; and the GDR by 3 times.[2] The machine building complex is developing more rapidly than industry as a whole (see Table 1). As a result, its proportion is increasing in national income and in industrial output. The highest level at which the growth rates of machine building output outstrip the growth of gross industrial output occurred in 1971-1975 in the People's Republic of Bulgaria, the Socialist Republic of Romania and the USSR. A 1 percent increase in industrial output was matched in the People's Republic of Bulgaria by 1.62 percent, in the Socialist Republic of Romania by 1.4 percent, and in the USSR by 1.54 percent in the growth of machine building output.[3]

Table 1.

Таблица 1

1. Темп прироста валовой продукции промышленности машиностроения и металлообработки *

2. Страны	3. Среднегодовой прирост, %								
	1961—1965 гг.			1966—1970 гг.			1971—1975 гг.		
	4. промышленность	5. машиностроение	6 соотношение темпов прироста	4. промышленность	5. машиностроение	6 соотношение темпов прироста	4 промышленность	5. машиностроение	6 соотношение темпов прироста
7. НРБ	11,7	18,3	1,56	10,9	15,6	1,43	9,1	14,7	1,62
8. ВНР	7,5	9,7	1,29	6,2	7,7	1,24	6,4	7,8	1,22
9. ГДР	5,8	8,1	1,39	6,5	8,2	1,26	6,5	6,6	1,02
10. Куба	—	—	—	—	—	—	—	—	—
11. МНР	9,8	3,9	0,40	9,9	24,6	2,48	9,2	9,6	1,04
12. ПНР	8,4	14,3	1,7	8,3	12,3	1,48	10,4	14,4	1,38
13. СРР	13,8	17,0	1,23	11,9	15,8	1,33	12,9	18,1	1,4
14. СССР	8,6	12,4	1,44	8,5	11,7	1,38	7,4	11,4	1,54
15. ЧССР	5,2	6,5	1,25	6,7	9,2	1,37	6,7	8,5	1,27

16. * Составлено и рассчитано по: «Статистический ежегодник стран — членов СЭВ за 1977 г.» с. 59—60.

Key:

1. Growth rate of the gross output of the machine building and metalworking industry;
2. Countries;
3. Average annual growth, percent;
4. Industry;
5. Machine Building;
6. Relationship between growth rates;
7. People's Republic of Bulgaria;
8. Hungarian People's Republic;
9. GDR;
10. Cuba
11. Mongolian People's Republic;
12. Polish People's Republic;
13. Socialist Republic of Romania;
14. USSR;
15. Czechoslovakian Socialist Republic;
16. Composed and Computed on the basis of: "Statistical Yearbook of the CEMA Countries for 1977," pp. 59-60.

As the result of the accelerated development of the machine building complexes of the CEMA countries their share in the world production of machine building output has reached almost 35 percent and has exceeded that of the United States and the European Common Market countries combined.[4]

However, the foreign economic relations of the machine building complexes of the CEMA countries are oriented primarily toward the commonwealth market. Their share in the world trade of machine building output (see Table 2) is much less than their potentialities. It can be assumed that to a large extent this situation is explained by the great demand which is made on the markets of the CEMA countries, by the quality of the products offered, and also by the insufficient efficiency of the foreign trade organizations which market output on the markets of third countries. Note has to be taken of a decrease in the share of the CEMA countries in world exports of machine building output.

Table 2

Таблица 2

1. **Доля стран — членов СЭВ и развитых капиталистических стран в мировом экспорте продукции машиностроения ***

2. Страны	1965 г.	1970 г.	1973 г.	1974 г.	1975 г.	1976 г.
3. Страны — члены СЭВ						
4. Всего:	11,2	10,5	10,9	10,0	11,0	10,6
5. НРБ	—	0,65	0,77	0,73	0,76	0,79
6. ВНР	1,09	0,84	0,81	0,84	0,91	0,61
7. ГДР	3,14	2,51	2,28	2,00	2,05	2,06
8. ПНР	1,72	1,5	1,53	1,5	1,64	1,64
9. СРР	—	0,49	0,54	0,49	0,56	0,38
10. СССР	3,73	3,16	2,81	2,61	2,33	2,3
11. ЧССР	2,82	2,11	1,8	1,57	1,55	1,59
12. Развитые капиталистические страны						
13. ФРГ	18,34	17,77	19,41	18,7	17,42	17,87
14. Франция	5,86	6,56	7,1	6,7	7,87	7,7
15. Англия	12,33	8,86	7,21	6,99	7,59	6,69
16. Италия	4,83	5,44	4,74	4,77	5,08	4,69
17. Бельгия—Люксембург	2,85	2,76	2,96	2,61	2,8	2,98
18. Нидерланды	3,0	2,58	2,76	2,71	2,73	2,82
19. Дания	1,09	0,99	1,02	1,04	1,05	0,94
20. США	22,22	19,99	17,16	18,8	19,03	18,24
21. Япония	5,86	8,76	11,25	12,43	11,41	13,22

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22. * Составлено по: «Bulletin of Statistics on World Trade in Engineering Products». 1976. U. N. N. Y., 1978.

[Key on following page]

Key:

1. Share of the CEMA countries and of the developed capitalist countries in world exports of machine building output;
2. Countries;
3. Member countries of the CEMA;
4. Total;
5. People's Republic of Bulgaria;
6. Hungarian People's Republic;
7. GDR;
8. Polish People's Republic;
9. Socialist Republic of Romania;
10. USSR;
11. Czechoslovakian Socialist Republic;
12. Developed capitalist countries;
13. FRG;
14. France;
15. England;
16. Italy;
17. Belgium-Luxembourg
18. The Netherlands;
19. Denmark
20. The United States;
21. Japan;
22. Composed on the basis of: "Bulletin of Statistics on World Trade in Engineering Products," 1976, U. N., N. Y., 1978.

Basic Tendencies of the Development of the Machine Building Complexes of the CEMA Countries.

The character and the common nature of the tasks facing the machine building complexes of the countries of the socialist commonwealth are becoming especially important. To a substantial extent this is determining the selection of the priority fields and forms of developing production integration. At the present time under the influence of the scientific and technological revolution a rationalization of the structure of the machine building production is being carried out in all of the countries. The basic requirement of this process consists in a fuller consideration of the capabilities of each country with a thorough use of the achievements of scientific and technological progress.

When a study is made of the changes in the structure of machine building as a whole the conclusion suggests itself that a growth of the share of general and electrical machine building in combination with a certain decrease in the share of transportation machine building has been a general tendency over the last ten years.

Since the middle of the 1960s the traditional branches of the complex have been developing on the basis of a wide introduction of technical innovations and science intensive branches have been receiving a preferential development. However, the structural changes are not taking place in the same way in different countries. The differences depend upon the characteristics and traditions of national production, the supply of qualified labor power, the availability of a raw materials base, the specialization of scientific and technical potential, and so forth.

Let us examine the structural changes in general machine building in more detail.[5] During the period since 1960 there has occurred in the Hungarian People's Republic, the Polish People's Republic, the Socialist Republic of Romania, the Czechoslovakian Socialist Republic, and the USSR a curtailment of the production of steam and hydraulic turbines which has been accompanied by an increase in their unit capacity. In the USSR, the People's Republic of Bulgaria, the Polish People's Republic, the GDR, and the Socialist Republic of Romania (not the Czechslovakian Socialist Republic and the Hungarian People's Republic) there has been an increase in the share of the production of tractors and agricultural machine building in the total output of machine building. In all of the CEMA countries the production of metal-working machine tools has increased; moreover, automatic equipment and machine tools with digital programmed controls have increased at the most rapid rates.

The high development rates of the chemical, cellulose and paper, and polygraphic industries and of industrial and civil construction and road construction have given rise to an increased demand for the output of the corresponding branches of the machine building complex. The production of equipment for the cellulose and paper industry and for land improvement work and of chemical, refrigeration, pump and compressor, and road construction equipment has increased at the most rapid rates.

In recent years there has been a stable demand for hoisting and transportation machinery and equipment whose production is growing and being perfected above all in the USSR and the People's Republic of Bulgaria.

A group of branches of electrical machine building is developing at the most rapid rates and an active structural reorganization is taking place in it. These tendencies are the result of technological progress which has been constantly expanding the sphere of application of the output of electrical machine building. In all of the countries there has been occurring an accelerated growth of the proportion of the output of radio electronics and instruments and of automation equipment and instruments in the total volume of machine building production. The CEMA countries have succeeded in taking care of, basically through their own production, the demand for household electrical appliances. The issue today is to improve their qualitative and esthetic characteristics.

Despite the decrease of its share in machine building production, the production of transportation equipment continues to occupy one of the leading places in the complex of machine building branches. The decrease in production has had its greatest effect upon the production of railroad transport.

There are substantial reserves for the development of resource saving productions in the machine building complexes. The use of reserves for decreasing, for example, the materials intensiveness, makes it possible not only to increase the efficiency of production, but also to improve the quality of output and its ability to compete on the markets of the CEMA countries and third countries. Thus, in the USSR the material intensiveness of a unit of machine building output is 18 percent higher and the metal intensiveness 23 percent higher than in the United States. The specific weight of a tractor in the United States comes to an average of 44 kilograms/horsepower, while in the USSR it is 63 kilograms/horsepower, of a single-scoope excavator -- 34 and 36 tons/per cubic meter of scoop capacity and of diesel engines -- 5 to 10 and 8 to 19 kilograms/horsepower.[6]

It should be noted that in recent years favorable results have been achieved in decreasing the metal intensiveness of machinery and equipment. For example, the metal intensiveness of turbines and diesel engines has been decreased by 28 to 30 percent. During the years 1971-1975 the metal intensiveness of passenger cars decreased by 20 percent and that of trucks by 15.5 percent. The average capacity of the tractors produced by the Ministry of Agricultural Machine Building has increased by 5.2 horsepower, or by 8.2 percent, while metal intensiveness has decreased by 4.5 kilograms/horsepower, or 5.9 percent.[7] However, despite the successes, quite a bit of effort will still have to be made in order to attain the level of world standards.

The necessity for the overall mechanization and automation of production processes, for supplying production with equipment which corresponds to the demands of scientific and technological progress and for the industrialization of all of the branches of material production and of scientific research has given rise to an accelerated growth of fixed productive capital compared to the growth of labor productivity. As a result, for a long period of time the return on capital levels has stayed on a relatively low level. The dynamics of return on capital is also influenced by the long periods involved in capital construction and the mastery of new objects, a substantial amount of incompleted construction, the developed technological and reproduction structure of fixed capital, the level of the use of labor power, the technology employed, the shift coefficient of the use of equipment, and many other reasons.

High capital investments growth rates are being maintained in the investment sphere. A reorientation is taking place in the structure of their use toward increasing the share of resources which is allocated for the modernization and reconstruction of operating enterprises. Exceptional attention is being devoted to decreasing the amounts of incompleted construction and to a further optimization of the economic structure on the basis of a preferential development for advanced and highly efficient branches of production. The largest proportion of capital investments is allocated for machine building in the GDR -- 20.5 percent, in the Hungarian People's Republic -- 20.4 percent, and in the Polish People's Republic -- 26.2 percent.[8]

The shortage of labor resources is making specific demands on the capital investments policy. The limited nature of labor power is dictating the necessity for increasing the productivity of existing equipment by means of modernization and reconstruction and also of decreasing the amount of the construction of new enterprises and ensuring a correspondence between the reproduction of labor power and of fixed capital. When these conditions are not observed there is an excessive increase in the amount of capital investments for an extensive expansion of jobs which cannot be used. As a result, there is a decrease in the general effectiveness in the use of capital which is expressed in a decrease in return on capital, in the shift coefficient, and in the workload of production capacities. For example, in the Czechoslovakian Socialist Republic this problem has not yet been solved in the necessary manner.

In 1971-1975 the average annual increase in the number of employees in industry came to .7 percent, while the increase in fixed capital came to 7.4 percent. An analysis of the use of labor power which was conducted by the Federal Ministry of Labor and Social Security has shown that in 1974 alone as a result of new capital construction 13,000 more jobs were created in industry than were eliminated as the result of the writing off of obsolete fixed capital, although the number of workers increased by only 400 people. As a result, in industry there were not enough workers per shift to tend 21.2 percent of the jobs, including 22.9 percent of the machine tools. This is a result of shortcomings in forming depreciation and writing off obsolete capital. With an annual increase in the machine tool park of 9.2 percent, the annual write-off is only 1.6 percent.[9] Approximately the same situation exists in the GDR.[10]

Participation by Machine Building Complexes in International Division of Labor

In the 1970s there arose an acute necessity for the forcing of scientific and technologic progress and for an accelerated reequiping on the basis of modern technology and equipment of both the machine building complex and other branches of the economy and industry. The accomplishment of this task is a very important condition for realizing the social and economic development plans and for raising the standard of living of the peoples of the CEMA countries. However, the coordinated basic directions of the development of machine building which has been worked out, structural policy, and the concentration of resources in the basic key directions do not yet correspond to the scope and complexity of the problems which were raised in these years. The specialization and cooperation of the production of the complexes on the basis of agreement forms has not entirely solved the urgent problems of improving the international division of labor. The basic development directions which were defined in the long-term special-purpose cooperation programs in machine building are agreed upon orientation points and fields in which new production and economic relations will be formed among the complexes on the basis of a consideration of structural changes. The result of their realization should be a coming together, a structural adaptation, and in a number of productions long-term and close interaction in the direction of creating a common machine building complex. It is precisely the supplementary and not parallel multi-branch structures of the complexes which create a real possibility for the formation of a common machine building complex.

The interrelations of the complexes are supported by branches which are based on the use of the results of scientific work and skilled labor. An orientation toward science intensive branches and toward a deepening of intra-branch specialization which is being promoted by the similarity of branch structures is becoming a characteristic feature of the specialization of the commonwealth countries. Meanwhile, the degree of their homogeneity, albeit slowly, continues to increase on the basis of a decrease in labor intensive productions in favor of science intensive ones. At the present time the share of such branches as machine building, chemistry, metal working, power engineering, and the production of transportation equipment comes to 40 to 50 percent of total industry in the CEMA countries. At the same time, the proportion of such branches as radio electronics and electronics is still smaller than in the developed capitalist countries.[11]

Another characteristic feature of the development of the CEMA countries is an increase in the degree of the common nature of the branch structure of their exports, and also the coming together of the branch structure of production in exports.[12] For example, in the Polish People's Republic the export quota in machine tool building comes to around 25 percent, in motor vehicle construction -- more than 40 percent, in tractor building -- 20 percent, and in ship building -- 70 percent. The USSR with its capacious market exported in 1977 more than 20 percent of its motor vehicle output and around 8 percent of its machine tools and tractors.[13] The structure of imports is also getting closer to the branch structure of production. This phenomenon is especially clearly expressed in the Hungarian People's Republic and the Polish People's Republic.

The development of these processes is promoting a further improvement of the division of labor among the machine building complexes of the CEMA countries as intra-national branch differentiation deepens and the level of production concentration rises. The branches are producing an ever narrower products list of output and have a tendency to strive for the large-series production of output of the same type with a large number of modifications on the basis of standardization, unification, and normalization. The endeavor of the individual branches of machine building to produce individual forms and even types of output in combination with the growth of the common nature of the branch structures of the production and foreign trade of the CEMA countries is giving rise to a growing production and technological homogeneity in the products which are produced on the basis of international specialization.[14]

An increase in the technological homogeneity of the machine building products which the countries exchange among themselves is the fundamental basis and precondition for joint work in the field of standardization and unification which, in essence, are coordinated planning measures to increase the degree of the homogeneity and interchangeability of the products which are produced. Thus, joint work, if it is performed in branches where a similarity of production processes has developed, stimulates the coming together of the technical level of their development in the creation of a base for deepening international production specialization and cooperation.

The above-noted facts are a component part of the aggregate of those phenomena which are determining a shift from the interbranch specialization to the intrabranch specialization of science intensive branches. It is also necessary to keep in mind that a high level of the production and technological homogeneity of the output which goes into foreign trade exchange is also a basis for raising the level of the concentration of internationally specialized productions. Along with this, a qualitatively similar production base is developing in the CEMA countries and the intra-national specialization of production is deepening, which is promoting an increase in the efficiency of the economy as a whole.
For many years the USSR and the Socialist Republic of Romania (see Table 3) have been machinery and equipment importers on the market of the CEMA countries. The place of the USSR machine building complex is determined by the position of the entire economic complex in the system of the international socialist division of labor, and also by the large capacity of the USSR domestic market which makes a large demand for machine building products of a wide products list. More than 40 percent of the imports of the machine building output which is produced by the CEMA countries is accounted for by the USSR.[15]

Table 3

Таблица 3

1. **Коэффициент эластичности импорта машин и оборудования (соотношение доли машин и оборудования в импорте и экспорте стран СЭВ во взаимной торговле)** *

2. Страны—члены СЭВ	1965 г.	1970 г.	1975 г.	1976 г.
	1,1	1,07	1,00	1,10
3. НРБ	1,76	1,7	1,02	0,98
4. ВНР	0,87	0,95	0,89	0,96
5. ГДР	0,36	0,66	0,61	0,62
6. ПНР	0,94	0,94	0,96	0,94
7. СРР	2,12	1,76	1,37	1,23
8. СССР	1,7	1,66	1,81	1,87
9. ЧССР	0,61	0,66	0,75	0,72

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10. * Рассчитано по: «Статистический ежегодник стран — членов СЭВ» за соответствующие годы.

Key:

1. Coefficient of the elasticity of machinery and equipment imports (relationship of the share of machinery and equipment in the imports and exports of the CEMA countries in mutual trade);
2. CEMA member countries;
3. People's Republic of Bulgaria;
4. Hungarian People's Republic;
5. GDR;
6. Polish People's Republic
7. Socialist Republic of Romania;
8. USSR;
9. Czechoslovakian Socialist Republic;
10. Calculated on the basis of: "Statistical Yearbook of the CEMA Member Countries" for the corresponding years.

The People's Republic of Bulgaria, the GDR, and the Hungarian People's Republic occupy first place among the CEMA countries with regard to the indicators of the value of the exports and imports of specialized output per unit of industrial production personnel. This is direct testimony to the large participation of the machine building of these countries in the international division of labor (see Tables 4 and 5). In so far as this indicator makes it possible to judge, the participation by the Czechoslovakian Socialist Republic does not correspond to a sufficient extent to the capabilities of its complex. For the sake of comparison, let us cite an example. Thus, in the People's Republic of Bulgaria a single person employed in machine building in 1977 accounted for 6,300 rubles of export output,[16] in the Hungarian People's Republic -- 4,200 rubles,[17] while in the Czechoslovakian Socialist Republic -- 3,600 rubles.[18]

Table 4

Таблица 4

1. Ранг страны (по данным о стоимости экспортируемой и специализированной продукции в расчете на 1 промышленно-производственного персонала в машиностроении) *

2. Страны	1975 г.		1976 г.		1977 г.	
	3. экспорт	4 специэкспорт	3 экспорт	4 специэкспорт	3 экспорт	специэкспорт 4.
5. НРБ	1	1	1	1	1	1
6. ВНР	3	2	2	3	2	2
7. ГДР	2	3	3	2	3	3
8. ПНР	4	4	4	5	4	5
9. СРР	5	5	5	6	5	6
10. ЧССР	6	6	6	4	6	4

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11. * Рассчитано по: «Машиностроение стран — членов СЭВ 1950—1977 гг.», М., 1978.

Key:

1. Country's rank (based on the data of the value of export and specialized output per 1 industrial production worker in machine building);
2. Countries;
3. Exports;
4. Special exports;
5. People's Republic of Bulgaria;
6. Hungarian People's Republic;
7. GDR;
8. Polish People's Republic;
9. Socialist Republic of Romania;
10. Czechoslovakian Socialist Republic;
11. Calculated on the basis of: "Machine Building of the CEMA Member Countries: 1950-1977" Moscow, 1978.

Table 5

Таблица 5

1. Экспорт машин, оборудования и транспортных средств в расчете на 1 занятого в машиностроении и металлообработке (в тыс. руб.) *

2. Страны	1960 г.	1965 г.	1970 г.	1975 г.	1976 г.	1977 г.
3. НРБ	0,535	1,44	2,07	4,4	5,1	6,3
4. ВНР	0,841	1,03	1.28	2,7/2,75	3,6	4,3
5. ГДР	1,08	1,41	1,97	2,9	3,3	3,6
6. ПНР	0,475	0,74	1,02	2,07/2,04	2,3	2,6
7. СРР	0.368	0,45	0,69	1,1	1,2	1,4
8. ЧССР	1,03	1,55	1,78	2,73	—	3,6

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9. * Рассчитано по: «Статистический ежегодник стран—членов СЭВ» и национальной статистики за соответствующие годы

[Key on following page]

Key:

1. Machinery, equipment, and transportation equipment exports per employee in machine building and metal working (in thousands of rubles);
2. Countries;
3. People's Republic of Bulgaria;
4. Hungarian People's Republic;
5. GDR;
6. Polish People's Republic;
7. Socialist Republic of Romania;
8. Czechoslovakian Socialist Republic;
9. Calculated on the basis of: "Statistical Yearbook of the CEMA Member Countries" and the national statistics for the corresponding years.

The GDR, USSR, and Czechoslovakian Socialist Republic have the most developed machine building complexes which dominate the market of the CEMA countries. The GDR and the Czechoslovakian Socialist Republic account for more than 40 percent of the machine building exports, and combined with the USSR the figure is around 60 percent.[19] However, only in the GDR do the amounts of machine building output deliveries correspond to the greatest extent to its complex's capacities.

The influence of foreign economic relations on the development of the complexes of the USSR and the Czechoslovakian Socialist Republic is relatively small. The dependence of the development of machine building complexes upon participation in the international division of labor is much greater in the Polish People's Republic, the Hungarian People's Republic, and the People's Republic of Bulgaria, and much smaller in the Socialist Republic of Romania (see Table 3).

Participation in the international division of labor permits each country to organize the structure of its machine building complex with regard to its economic conditions and to develop those branches of production in which, compared to other countries, the best results are achieved, and, on the contrary, to limit the production of products with worse indicators. This kind of approach requires a deepening of the international specialization of production, an expansion of relations, and a search for new forms of cooperation and new partners. Recently there has been a strengthening of relations with the companies of developed capitalist countries.

One of the motives for the development of the cooperation among the partners from the CEMA countries is the acquisition of modern equipment and technology, a rise in the scientific and technical level of production, a reduction of the scarcity of specific types of output, and the receipt of freely convertible currency. Machine building accounts for 25 percent of the contracts (second place after the chemical industry) in the industrial cooperation between the CEMA countries and the West. Along with this, the importance of cooperation in the production of transportation equipment is increasing for the Czechoslovakian Socialist Republic and the Socialist Republic of Romania.[20]

In a number of the CEMA countries, among the branches of machine building, special attention is being devoted to the development of the more advanced branches which are oriented toward exports. The conception which is aimed at the formation of an export structure within the framework of the machine building complexes fosters the formation of a dual structure of machine building which differs in itself with respect to production level and functioning indicators. This is explained by the fact that although the demands on the CEMA market upon output quality have increased, the demand can still be satisfied with output of a lower quality than the products supplied to western partners. As a rule, branches with higher indicators of economic and production work which ensure a high level of economic efficiency for these productions are represented in the group of branches which is oriented toward the markets of the capitalist countries. A group of export branches is being formed in all of the CEMA countries, at especially rapid rates in the Hungarian People's Republic and the Polish People's Republic,[21] and at slower rates in the GDR and the Czechoslovakian Socialist Republic. This tendency is most vividly expressed in the countries with a substantial unfavorable trade balance in their trade with the developed capitalist countries.

The expansion of the various forms of economic cooperation, especially industrial cooperation with the companies of capitalist countries, is beginning to exercise an important influence on the scope and structure of the economic relations between the machine building complexes of the CEMA countries. Many of the largest machine building enterprises of the CEMA countries are concluding long-term agreements on cooperation with western companies. As a result, the deliveries to the West of machinery and equipment which are based on them are growing at rather rapid rates. Thus, for example, according to the plan, compared to 1975, in 1980 in the Hungarian People's Republic machinery output exports will increase by 2 times, including 76 percent to the socialist countries, and 186 percent to the capitalist countries.[22] In machine tool building exports to the socialist countries come to 3 percent of production, while to the capitalist countries the figure is 7 percent.[23] The proportion of the most productive machines, of machine tools with digital programmed controls, and of unique and high-precision equipment is growing.

A number of basic tendencies can be distinguished in the integration process of the machine building complexes: first, scientific and technological progress is leading to the fact that the structure of the exports of machine building output is changing in favor of dynamic progressive branches. Individual countries are adapting to this process in varying degrees. Secondly, especially in recent years, there has been a forced development of the export production of labor intensive, nonmaterial intensive products. The share of mass produced machinery and equipment, especially of durable consumer goods, is increasing in the structure of the trade of the CEMA countries. As a rule, these are goods with a high capital, labor, and science intensiveness which make large demands upon the organization of a wide system of technical service. Thirdly, the share of trade in component parts, units, and spare parts is increasing. The share of overall objects is increasing in the mutual deliveries of the CEMA countries. Thus, the Polish People's Republic is exporting overall equipment for chemical enterprises, and the People's Republic of Bulgaria is doing so for the food and tobacco industries. The delivery of overall objects is giving rise to an expansion of scientific and technological cooperation and to the organization of personnel training. Fourthly, the increased exports of machinery and equipment is being accompanied by a lengthening of the periods of the credit which is extended in international trade. It can be assumed that in this case there is a definite mechanism in operation in foreign trade which holds back the growth of the amount of international credit and prevents the appearance of a "credit strain." The increase in the proportion of overall products in the exports of machine building is exercising a definite influence on this phenomenon.

FOOTNOTES

1. "RGW -- TECHNISCHE ANGEBOT," No. 2, 1977.

2. PLANOVOYE KHOZYAYSTVO, No. 7, 1978, p. 112.

3. Calculated on the basis of "Statistical Yearbook of the CEMA Member Countries for 1977," pp. 59-60.

4. Calculated on the basis of: "Yearbook of Industrial Statistics, 1976," Vol. 1, New York, General Industrial Statistics.

6. VOPROSY EKONOMIKI, No. 6, 1975, p. 100.

7. PLANOVOYE KHOZYZYSTVO, No. 3, 1976, p. 69.

8. Calculated on the basis of: "Statistical Handbook of the CEMA Countries for 1978," pp. 139-145.

9. PLANOVANE GOSPODASTVE, No. 3, 1976, pp. 25-35.

10. WRITSCHAFTSWISSENSCHAFT, No. 3, 1977, pp. 383-384.

11. N. Borokh and S. Sil'vestrov, "Cooperation of the CEMA Member Countries in Industrial Production," Moscow, "Ekonomika," 1978, p. 63.

12. The indexes of the similarity of the structures of exports and production for the Hungarian People's Republic, the Polish People's Republic, and the USSR in 1955 came to 79, 63, and 57, respectively (the branch structure of production -- 100), and in 1970 -- 82, 80, and 66.

13. Calculated on the basis of: "Statistical Yearbook of the CEMA Countries for 1978."

14. For example, in analyzing the foreign trade of the CEMA countries it is possible to establish that a number of countries exchange output of the electrical engineering industry with a high degree of production and technological and scientific and technical homogeneity. This applies, in particular, to mutual deliveries of electric engines of different capacities. Until recently the object of production specialization and cooperation in the CEMA countries in the field of radio electronics was final output supplied with parts and circuits which did not get onto the national market. At the present time 25 to 35 percent of the commodity products list of the radio electronics industry is made up of individual component elements and parts, semi-conductors, integral circuits, bulbs, kinescopes, and so forth (VESTNIK POL'SKOY EKONOMIKI, No. 24, 1975, p. 5).

15. Calculated on the basis of: "Statistical Yearbook of the CEMA Countries for 1978."

16. Calculated on the basis of: "Statistical Yearbook for the People's Republic of Bulgaria," Sofiya, 1978, Table 9, p. 159; V'NSHNA T'RGOVNYA NA NRB, 1960-1977, Sofiya 1978, Table 21, p. 23.

17. Calculated on the basis of: "Hungarian Statistical Handbook for 1978," Budapesht, 1978; KYUL'GAZDASHAG (in Hungarian), No. 6, 1978; "Economic Information" No. 10, 1978, Secretariat of the CEMA.

18. Calculated on the basis of: "Czechoslovakian Foreign Trade," No. 1-2, 1979, p. 10; STATISTICKA ROCENKA CSSR, 1978, Praha, 1978.

19. Calculated on the basis of: "Statistical Yearbook of the CEMA Countries for 1977," Moscow, 1978.

20. ECE.R (Trade), R. 355/ADD.2.15/.Nov., 1977; "Information Bulletin of the International Bank for Economic Cooperation," No. 18, 1977, pp. 9-12.

21. For example, since the beginning of the 1970s in the Hungarian People's Republic out of 44 basic productions in the machine building

complex 8 to 10 are developing at outstripping rates: buses and the parts and units for them; computers; production management automation equipment and instruments, and so forth. NEPZABADSAG, No. 99, 1977; FIGYELO, No. 25, 1977.

22. FIGYELO, No. 48, 1977.

23. Ibid., No. 8 1977.

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MANPOWER: LABOR, EDUCATION, DEMOGRAPHY

GROWTH IN NATIONAL PROSPERITY

Moscow EKONOMICHESKAYA GAZETA in Russian No. 52, Dec 79 p 1

[Article: "The Growth of National Prosperity"]

[Text] Speaking at the November (1979) CPSU Central Committee Plenum, comrade L. I. Brezhnev pointed out that a lot of work has been done since the beginning of the five-year plan to implement the party's economic and social policy which was developed at the 24th and 25th CPSU congresses, and that successes are present--and the successes are considerable.

The most general indicator of the rise in the people's standard of living is real per capita income. This has increased more than 13 percent during the four years. General expenditures to raise the people's standard of living since the beginning of the five-year plan calculating its final year will be 15.4 billion rubles.

The sale of consumer goods has grown. Retail goods turnover in comparative prices grew by 18 percent and the volume of everyday services -- by one third.

A total of 423 million square meters of living space with an increase in the quality of living assets has been constructed in the country during the four years of the five-year plan.

As was pointed out during the November plenum of our party's Central Committee, the successes achieved are a good basis for solving the economic tasks of 1980.

During the final year of the 10th Five-Year Plan, real per capita income will increase by 2.9 percent based on the growth of national income, the production of consumer goods and the development of services and it will grow by 16.6 percent during the five-year plan on the whole. Public consumption funds will grow by 5.5 percent and reach 116 billion rubles.

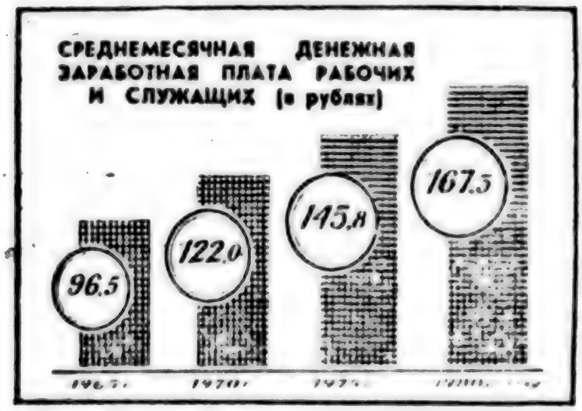
The high rates of housing construction are being maintained. As a result of all sources of financing, housing with an overall area of 109.4 million square meters will be constructed. This will provide the opportunity to bring the average general housing area allotment for urban dwellers to 12.9 square meters. Housing conditions will be improved for more than 10 million people, and during the five-year plan in general -- for more than 50 million people.

The demand of the population for a number of goods will be satisfied better. A retail goods turnover in state and cooperative trade of 264.2 billion rubles, or 5.1 percent more than in 1979, is provided for.

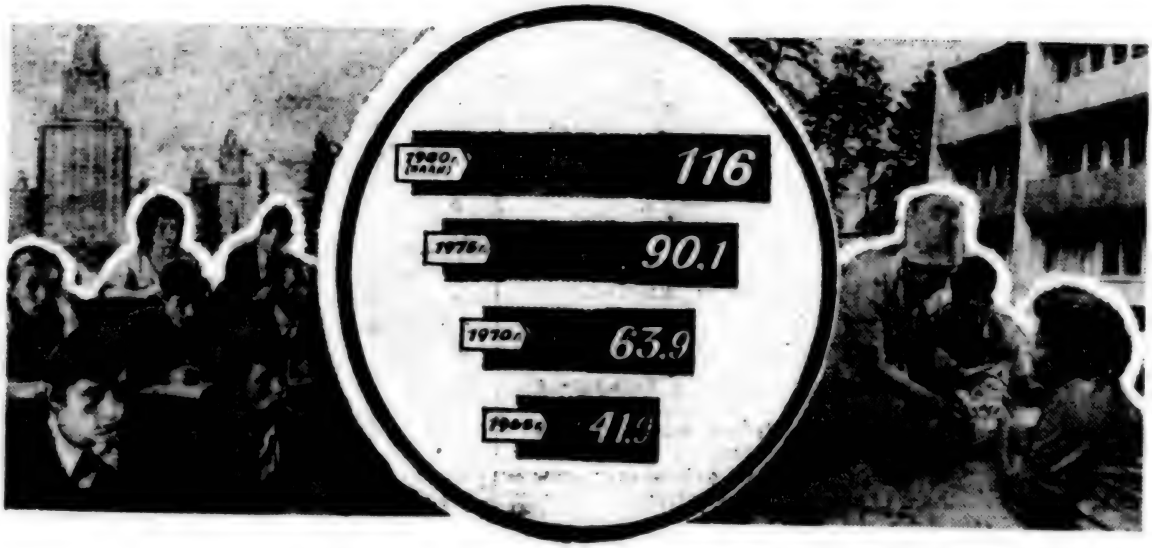
Children's pre-school establishments with almost 500,000 places will be constructed in 1980 by state capital investments and the resources of communist subbotniks [work given without pay to the state on days off or overtime]. School buildings with 934,000 student places will be built by state capital investments, and with 191,000 places by kolkhoz resources.

The overall number of beds in medical establishments will increase by 1.9 percent and will reach 3.3 million by the end of 1980.

The guarantee of further growth in national prosperity lies in the economic might of the motherland and in the day-to-day efforts of all the workers. The party is calling for the final year of the five-year plan to be transformed into a year of urgent work, of working in a Leninist way in the name of new achievements in the people's welfare.



Average Monthly Monetary Wages of Workers and Employees
(in rubles)



Payments and Benefits From Public Consumption Funds (in billions of rubles)

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MANPOWER: LABOR, EDUCATION, DEMOGRAPHY

AZERBAIJAN VUZ RUSSIAN LANGUAGE INSTRUCTION FOR SPECIALISTS

Moscow VESTNIK VYSSHEY SHKOLY in Russian No 11, Nov 79 p 15

[Article by Candidate of Pedagogical Sciences A. I. Useynova, Azerbaijan Institute of Petroleum and Chemistry: "With Regard to The Specifics of Non-language Specialties"]

[Text] Having accumulated experience and studied the practices of other VUZ's, the Russian Language Chair at Azerbaijan Institute of Petroleum and Chemistry is seeking optimal ways of intensifying the training process. However, the tasks facing the chair are more and more complex with each year: demands as to the knowledge Azerbaijan students have of Russian, and consequently demands as to the methods of training, are being increased by life itself.

Here, we basically have students who have received a secondary education in Azerbaijani. City residents have an adequate mastery of the language, but the influx of rural young people into the institute had increased in recent years, and they are less fluent in Russian: there is almost no Russian language environment in rural areas.

It is not easy to teach students with differing levels of knowledge of Russian, and teachers have done much to ensure that institute graduates are fluent in the language. As a result of a well thought-out division of students into subgroups, of regular supplemental exercises with them, of active nonlecture work, and of attempts to create the necessary language environment in the dormitory, certain successes have been achieved. By the end of the 1977-1978 academic year, the promotion rate had reached 99.2 percent for Russian in the day division, 97.2 percent in the night-school division and 94.4 percent in the correspondence division.

However, we were hampered by the lack of a stable program which would meet the new demands on and features of the VUZ. So during the past academic year the chair received a new practical Russian program for national groups of union and autonomous republic nonlanguage VUZ's, a program approved by the USSR Ministry of Higher and Secondary Special Education. Calendar plans were drawn up on its basis in accordance with our VUZ's structure. In particular, we decided to change the group structure for Russian language exercises, to combine students on the basis of their future specialties. We select appropriate popular-science texts for exercises with each subgroup. The problem, unfortunately, is that there have heretofore been no specially selected materials and aids in Russian for nonlanguage VUZ national groups which have been based on type of specialized training.

We think Students should be prepared to hear lectures in Russian in stages. They must initially be taught to articulate the main thought in a new text given out by the teacher during the exercises and to record the main substance in thesis form. The homework assignment should consist in reconstructing the content of the text in brief without referring to it (the teacher usually collects handout material from students after lecture-hall exercises). When these habits have been established, one can begin developing habits of listening to lectures and taking notes in his special discipline. And the teacher is greatly assisted in this by technical means. So it was precisely based on the Russian language chair that the TSO [technical means of training] sector was created at the institute.

We try to use the TSO comprehensively and, depending on our specific aims, to develop particular habits and reinforce them, as well as to accustom students to using technical means not just in lecture-type exercises under the supervision of a teacher, but also in their independent work in the group or individually.

Of course, the use of audiovisual aids as a system and with certain methods procedures requires a special lesson organization. To this end and together with technical associates in the TSO sector, we are preparing concrete lesson methods for which we are choosing written and spoken exercises which are analytical, structural and creative in nature. All the exercises are permeated basically by a scientific and technical lexicon.

A year of work using the experimental program has shown that its practical introduction has been retarded by the lack of a stable textbook, concrete methods recommendations and occupationally adapted didactic material.

We have also concluded that the transfer of language groups to the new training system requires of us a certain redistribution of both type and amount of work at all stages of Russian language training -- initial-correctional, basic and supplemental.

We view the final goal of the training to be not just the ability to read Russian without translation, but also that students be taught to annotate what they have read, to write a summary, report on production practice and course work; they must understand and take notes on lectures in Russian in all disciplines. Our most immediate task is to prepare students for listening to lectures in courses in their specialties and to read supplemental scientific literature in Russian.

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TRANSPORTATION

NEW CIVIL AIR ROUTES, AIRLINER REPLACEMENTS NOTED

Moscow VOZDUSHNYY TRANSPORT in Russian 12 Jan 80 p 2

/Article by V. Patsiya: "Distant Cities Have Become Closer"/

/Text/ The network of civil aviation's domestic routes is being expanded every year. And this year about 50 new air routes will appear in the central schedule. Most of these lines and routes will be opened closer to summer, the busiest period for air transport. But Tu-154's already have begun flights on the new Khabarovsk-Irkutsk-Chelyabinsk-Rostov route since 1 January. After an extended interval, Tu-134 aircraft have restored communication on the Gor'kiy-Sverdlovsk-Tomsk-Bratsk line. These same aircraft already are flying on the Moscow-Kustanay-Tandy-Kurgan and Moscow-Leninakan routes.

In May, the Mineral'nyye Vody-Perm'-Noril'sk, Vorkuta-Syktyvkar-Gor'kiy-Sochi routes will be opened, and in June the Mineral'nyye Vody-Ufa-Pavlodar-Chita, the Mineral'nyye Vody-Ufa-Bratsk-Yakutsk, and other routes will be opened. Modern Tu-154 and Tu-134 airliners will fly on all these routes. The first flight of the Il-62 should be made on 1 June on the route from Petropavlovsk-Kamchatskiy to Novosibirsk to Mineral'nyye Vody.

Completion of the renovation of airports and the arrival at aviation enterprises of new aviation equipment will make it possible to replace obsolete types of aircraft with modern and more spacious airliners on more than 100 lines. So Tu-154's have replaced Il-18's on the Moscow-Anadyr' route, and they also will be flying henceforth on the Khabarovsk-Irkutsk-Tomsk-Ufa-Sochi, Rostov-Ufa-Novosibirsk, and Murmansk-Leningrad-Kiev routes. The Tu-154 also has replaced the Il-18 on the lines from Dushanbe to Sverdlovsk and Riga and from Moscow to Ashkhabad. This year Tu-154's will begin regular flights on the Moscow-Kirovabad, Frunze-Osh-Baku-Sochi, Abakan-Kuybyshev-Sochi, Krasnoyarsk-Kazan'-Donetsk-Odessa, and Alma-Ata to Sverdlovsk routes. They will begin flying from Rostov to Novosibirsk and Leningrad, from Riga to Tashkent, from Kazan' to Leningrad and Sochi...

Beginning 1 January, Tu-134 aircraft fly from Krasnodar to Kuybyshev, Ufa and Gor'kiy, from Moscow to Kurgan and Magnitogorsk, and from Chelyabinsk to Alma-Ata and Krasnodar. These aircraft also will replace An-24's on the Kurgan-Kuybyshev-Sochi, Magnitogorsk-Volgograd-Simferopol', Kirov-Chelyabinsk-Novosibirsk, and other lines. Modern comfortable airliners will make air travel for many thousands of passengers faster and more pleasant.

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HELICOPTERS USED IN POWER TRANSMISSION LINE CONSTRUCTION

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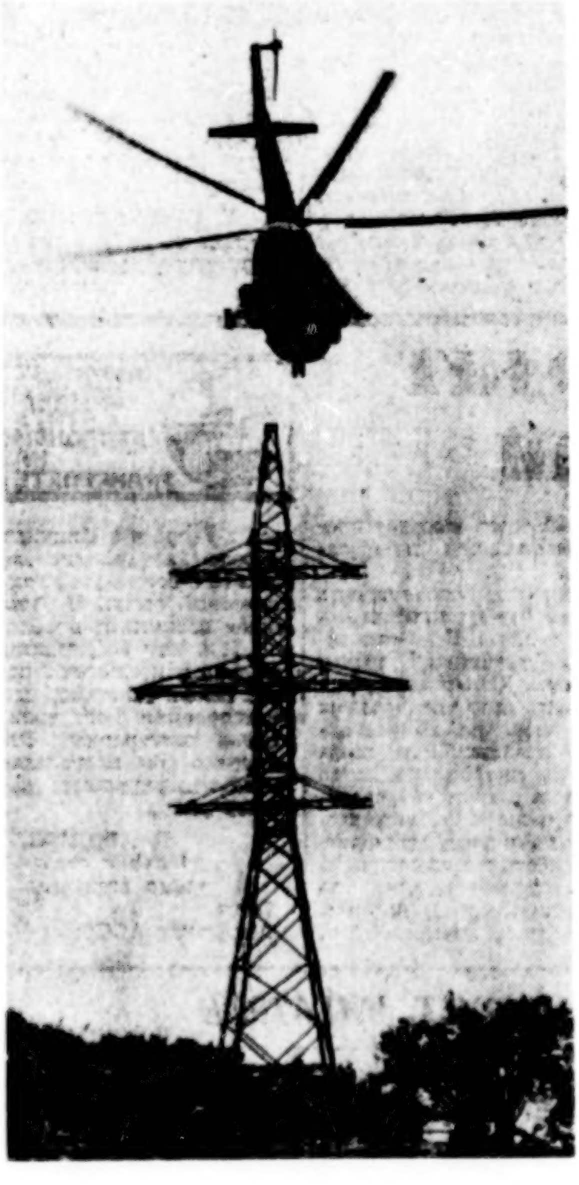

[Photo Caption]

[Text] An institute helicopter erects supports for a power transmission line in the mountains of the Caucasus by swinging it onto the foundation.

Recommendations developed by scientists and flight personnel of the All-Union Scientific Research Institute for the Use of Aviation in the National Economy, located in Krasnodar, are rendering considerable assistance to the country's national economy.

The recently created division for the application of aviation in industry, geology and construction is operating successfully here. Thus the technique of using helicopters for installing foundations and supports and for paying out wires when laying power transmission lines has been worked out and incorporated.

In 10 years, about 300 scientific developments, over 100 of which have been introduced, yielding tens of thousands of rubles in savings, have been produced by the institute's collective.

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